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Institute for Computer Sciences and Technology Publications, 1966-1976

Addie G. Chattic

Information Technology Division
Institute for Computer Sciences and Technology
National Bureau of Standards
Washington, D.C. 20234

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U.S. DEPARTMENT OF COMMERCE

NATIONAL BUREAU OF STANDARDS

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U.S. DEPARTMENT OF COMMERCE, Juanita M. Kreps, *Secretary*

Dr. Sidney Harman, *Under Secretary*
Jordan J. Baruch, *Assistant Secretary for Science and Technology*
NATIONAL BUREAU OF STANDARDS, Ernest Ambler, *Director*

Preface

This bibliography contains references to publications in various areas of computer science and technology by personnel of the Institute for Computer Sciences and Technology (ICST), National Bureau of Standards (NBS). ICST authors publish in a variety of media, including technical journals, conference proceedings, and NBS publications series: technical notes (TN's), special publications (NBS-SP's), informal reports (NBSIR's), monographs, and others. Only the material published by ICST authors in the NBS publications series is covered in this bibliography.

This listing covers the period 1966, when the Center for Computer Sciences and Technology (now ICST) was established, through 1976. An addendum lists the first 16 documents in the new Series on Computer Science and Technology, (NBS Special Publication 500-), which was initiated in January 1977. Readers are also referred to NBS Publications List 84, which lists publications by ICST personnel in all media for 1974-76 and all Federal Information Processing Standards (FIPS) publications in effect. A copy of NBS PL 84 can be obtained by writing to ICST, Room B260, Technology Building, National Bureau of Standards, Washington, D.C. 20234. ICST plans to keep current such lists of publications by the staff, for ease of reference by colleagues in the computer field.

Copies of the documents listed in this bibliography may be consulted in the Information Technology Division, Room B250, Technology Building, National Bureau of Standards (in Gaithersburg, Maryland). (For information or directions, call (301) 921-3517.) Inquiries about individual papers may be addressed directly to the authors at the Institute for Computer Sciences and Technology, National Bureau of Standards, Washington, D.C. 20234. (Readers are advised, however, that older publications are generally out of print and are available only for consultation at the Information Technology Division, as noted above.)

This compilation was prepared by Addie G. Chattic, assisted by Martha M. Gray and Jacqueline B. Jones of the Information Technology Division. The manuscript is computer produced except for a few typed pages prepared by Barbara Peterson of the Division. Comments on this and suggestions for future bibliographies will be welcomed by the Information Technology Division, ICST, NBS.

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INSTITUTE FOR COMPUTER SCIENCES AND TECHNOLOGY PUBLICATIONS, 1966-1976

Abstract

This bibliography consists of the publications authored by personnel in the Institute for Computer Sciences and Technology (ICST), National Bureau of Standards (NBS), from 1966 through 1976. The references, which total more than two hundred, are to publications in NBS media only. There are three cross-reference indexes to the bibliography: personal author index, key word index, and key word out-of-context (KWOC) index. Also included is a list of publications in the recently established National Bureau of Standards Special Publication 500- series.

Key Words: Bibliography; computer literature; computer science publications; Institute for Computer Sciences and Technology publications

INTRODUCTION

The Institute for Computer Sciences and Technology (ICST), National Bureau of Standards, conducts research and provides technical services designed to aid Government agencies in improving cost effectiveness in the selection, acquisition, and utilization of automatic data processing equipment (Public Law 89-306); provides advisory and consultative services to other agencies of Government to support the formulation of ADP management and procurement policies and to assist in solving specific computer application problems; and develops and recommends Federal Information Processing Standards. In the course of discharging these responsibilities, ICST staff members prepare technical reports, technology assessments, computer technology policy analyses, and summaries or proceedings of conferences and symposia which the Institute sponsors or conducts. Such publications may appear in NBS publications media, in professional or technical journals, or as separate volumes such as proceedings or monographs.

The Information Technology Division has prepared this listing of NBS publications by ICST staff members as a service to colleagues in the computer field. In order to improve its utility, the listing is accompanied by computer-produced indexes. Thus each document was cataloged and the data recorded in machine-readable form through the use of EDTEXT, a word-processing computer program for the NBS Univac 1108 computer. The data file resulting from this procedure was run through a special set of programs developed and operated by the Computer Information Section, Information Technology Division, to produce the indexes and the bibliographic listing described below.

HOW TO USE THE INDEXES

Bibliographic Index

This index is the major reference point, to which all other indexes refer. The index contains bibliographic citations ordered by their date of publication. The first item in each citation is the accession number, the first two digits of which represent the year of publication (for example, 66000001 means that the report was published in 1966). The complete annotation for each document follows the accession number.

Personal Author Index

Each author is listed only once in this index. Under each author's name are listed the titles of that author's works, followed by the accession number of the documents. The accession number is used as a cross-reference to the bibliographic index for complete citations.

Key Word Index

This index contains key words that were assigned to the documents by the author or cataloger. Under each key word is a list, alphabetically arranged, of titles followed by their accession number. This index cross-references the bibliographic index through accession numbers.

Key Word-Out-of-Context (KWOC) Index

This index consists of significant words from the title of each report. This index differs from the others in that the titles have not been truncated: if the title is too long to fit on one line, it continues on a second line and is followed by the accession number. This index cross-references the bibliographic index by accession number.

Addendum: Additional ICST Publications

This addendum lists three reports which were omitted from the main bibliography, as well as the publications in the NBS SP 500- series, accompanied by the personal author index (which cross references the bibliographic listing in the addendum only).

BIBLIOGRAPHIC INDEX

66000001 RANKIN, KIRK, STEPHANIE SIEGEL, ANN MCCLELLAND, JAMES L. TAN, A GRAMMAR FOR COMPONENT COMBINATION IN CHINESE CHARACTERS, DIV. 640, 1966, TN-296, 118P, 5 REFS

A LINGUISTIC ANALYSIS OF ONE ASPECT OF THE STRUCTURE OF CHINESE CHARACTERS IS PRESENTED. THE ANALYSIS IS AN EXTENSION INTO TWO DIMENSIONS OF A GENERAL APPROACH TO ONE-DIMENSIONAL LANGUAGE STUDY. RESULTS OF THE ANALYSIS ARE IN THE FORM OF A THREE-LEVEL GENERATIVE GRAMMAR. THE FIRST LEVEL FORMALIZES RESTRICTIONS GOVERNING THE GENERAL COMPLEXITY OF WELL-FORMED CHINESE CHARACTERS; THE SECOND LEVEL FORMALIZES CO-OCCURRENCE CONSTRAINTS AMONG CHARACTER COMPONENTS AND THE PARTICULAR SPATIAL ARRANGEMENT OF THESE COMPONENTS IN CLASSES OF CHARACTERS; THE THIRD LEVEL CONSTITUTES A PROCEDURE FOR SELECTING ACTUAL COMPONENTS FROM A LEXICON. FINALLY AN EVALUATION OF THE GRAMMAR IS PRESENTED, IN TERMS OF CRITERIA USED IN EVALUATING NATURAL LANGUAGE GRAMMARS.

66011701 BOYLE, OON R., PHILIP G. STEIN, VERY HIGH SPEED TRANSIENT RECORDER, DIV. 650, 17 JAN 66, NBSR 9032, 10P

THE PROMPT EFFECTS OF A HIGH ALTITUDE NUCLEAR DETONATION RESULT IN NEAR-SIMULTANEOUS TRANSIENTS WHICH MAY BE OBSERVED OVER LARGE PORTIONS OF THE SPECTRUM. AS A RESULT, THE STUDY AND ANALYSIS OF COINCIDENTAL DISTURBANCES OCCURRING IN MULTIPLE GEOPHYSICAL SENSOR CHANNELS IS IMPORTANT TO THE VELA PROGRAM.

THIS REPORT DESCRIBES A SYSTEM FOR DETECTING COINCIDENTAL TRANSIENTS WHICH MAY OCCUR IN A NUMBER OF INDIVIDUAL SENSOR CHANNELS, IDENTIFYING THE SPECIFIC SENSORS CONTRIBUTING TO THE N-FOLD COINCIDENCE AND RECORDING THE TRANSIENT WAVEFORMS OF SELECTED CHANNELS.

66040001 PRYZBYLIK, ANDREW T., A PUNCHED PAPER TAPE TO DIGITAL MAGNETIC TAPE CONVERTER, DIV. 650, APR 66, NBSR 9325, 26P, 5 REFS

IT IS THE PURPOSE OF THIS REPORT TO DESCRIBE A PUNCHED PAPER TAPE-TO-DIGITAL MAGNETIC TAPE CONVERSION SYSTEM, WHICH IS NOW IN OPERATION AS AN EXPERIMENTAL FACILITY. THE DATA CONVERTER SYSTEM IS CONSTRUCTED OF ELECTRONIC MODULES WHICH WERE DESIGNED FOR FLEXIBLE INTERCONNECTION. THE CONTROL PROGRAM FOR THE SYSTEM IS DESIGNED ON A REMOVABLE PATCHBOARD. EACH MODULE HAS A SPECIFIC FUNCTION TO PERFORM IN A CONTROL PROGRAM, AND TO ACHIEVE THIS FUNCTION THE MODULE MUST BE PATCHED BY MEANS OF ITS CONTROL AND DATA CONNECTIONS ON THE PATCHBOARD.

A DESCRIPTION OF THE PATCHBOARD AND EACH OF THE MODULES IS GIVEN, ALONG WITH A DETAILED EXPLANATION OF TWO EXAMPLE CONTROL PROGRAMS. PATCHING DIAGRAMS ARE INCLUDED TO SHOW THE LOCATION OF CONTROL AND DATA CANNECTIONS FOR EACH MODULE. A GENERAL OUTLINE OF THE PROGARAM PATCHBOARD SHOWS THE RELATIVE POSITION OF THE MODULE UNITS. PATCHING OF AN EXAMPLE CONTROL PROGRAM IS EXPLAINED AND ILLUSTRATED WITH A DIAGRAM SHOWING THE PRIMARY CONTROL CONNECTIONS.

66040002 HALL, ORRINGTON R., MOBIDIC - TELETYPE INTERFACE, DIV. 650, APR 66, NBSR 9338, 12P

THIS DOCUMENT IS A DETAILED ENGINEERING REPORT CONCERNING A DEVICE WHICH IS SPECIFICALLY DESIGNED TO FURNISH A LOGIC AND ELECTRICAL INTERFACE BETWEEN THE MOBIDIC B TWIN DIGITAL COMPUTER AND A STANDARD EIGHT-LEVEL CODE TELETYPEWRITER. AMONG THE FEATURES EMBODIED IN THE UNIT ARE FACILITIES FOR HANDLING A FULL 'ASCII' CHARACTER AND A MEANS OFF CHECKING THE CHARACTER MOST RECENTLY TRANSMITTED TO THE TELETYPE. THIS LATTER FEATURE, WHICH WILL BE REFERRED TO HEREAFTER IN THIS REPORT AS AN 'ECHO' CHECK, MAY BE IMPLEMENTED IN EITHER A FULL-DUPLEX OR HALF-DUPLEX SYSTEM.

IN EITHER MODE OF OPERATION, RANDOM MANUAL DEPRESSION OF A TELETYPE KEY WHILE THAT TELETYPE IS RECEIVING INFORMATION WILL RESULT IN A DISPARITY BETWEEN THE CHARACTER TRANSMITTED AND THE CHARACTER REMAINING IN THE INTERFACE AT THE END OF TRANSMISSION. UPON DETECTION OF SUCH A DISPARITY, AN APPROPRIATE RESPONSE MAY BE OBTAINED FROM THE SYSTEM. THIS FEATURE AFFORDS THE OPERATOR AT THE ROMOTE TELETYPE THE ABILITY TO COMMUNICATE WITH THE SYSTEM DURING A LONG SYSTEM-TO-REMOTE-STATION-TRANSMISSION AND THUS HAS CONSIDERABLE UTILITY. TWO OF THESE UNITS WERE OPERATING ON A FULL-TIME BASIS SINCE THE SECOND WEEK OF AUGUST 1965. DETAILS OF THEIR OPERATION HAVE BEEN RECORDED IN THE SYSTEM ENGINEERING LOG, AND SUBSTANTIAL USEFUL INFORMATION HAS BEEN DERIVED THEREFROM.

66040101 PYKE, THOMAS N., JR., THE NBS CORD TIME SHARING SYSTEM, DIV. 650, 1 APR 66, NBSR 9339, 18P

CORO IS AN OPERATING SYSTEM FOR A COMPUTER WITH ON-LINE REMOTE OEVICES. THE SYSTEM CONSISTS OF AN EXECUTIVE PROGRAM OESIGNEO TO ENABLE THE OUAL-PROCESSOR OR MOBIDIC COMPUTER FACILITY WITH MULTIPLE REMOTE TERMINALS TO OPERATE IN A TIME-SHAREO MOOE. AT EACH OF A NUMBER OF REMOTE TERMINALS, INCLUDING TELETYPES ANO OISPLAY SUBSYSTEMS, PROGRAMS ANO OATA CAN BE ENTERED INTO THE SYSTEM, PROGRAM EXECUTION INITIATEO, AND RESULTS RETURNEO TO THE TERMINALS. A OATA BASE IS AVAIALBLE TO ALL USERS THROUGH THE SYSTEM. THE CONTENTS OF THIS MANUAL OESCRIBE THE SYSTEM IN OPERATIONAL STATUS AT NBS AS OF MARCH 1966.

66052801 STEIN, PHILIP G., TRANSISTORIZEO BUILOING BLOCKS FOR OATA INSTRUMENTATION, DIV. 650, 28 MAY 66, TN-268, 118P

A FOURTH FAMILY OF ETCHEO-CIRCUIT LOGIC CAROS HAS BEEN OEVELOPED AT THE NATIONAL BUREAU OF STANOAROS. IT CLOSELY PARALLELS THE OESIGN CRITERIA ANO PHILOSOPHY EMBOOIEO IN PREVIOUS WORK, BUT OIFFERS IN MANY RESPECTS. EACH CIRCUIT OESCRIPTION IS SEPARATEO PHYSICALLY FROM THE OTHERS TO FACILITATE USE AS AN APPLICATION MANUAL. SPECIFICATIONS, TYPICAL USES, GRAPHIC SYMBOLS ANO RELIABILITY ARE DISCUSSEO IN BRIEF.

66061501 HENOERSON, MAOELINE M., JOHN S. MOATS, MARY ELIZABETH STEVENS, SIMON M. NEWMAN, COOPERATION, CONVERTIBILITY, ANO COMPATIBILITY AMONG INFORMATION SYSTEMS: A LITERATURE REVIEW, DIV. 600, 15 JUN 66, NBS MISC. PUBL. 276, (LC 66-60028), 140P, 660 REFS

THE PURPOSE OF THE STUOY OF THE LITERATURE ON WHICH THIS REPORT IS BASEO WAS TO EXAMINE THOSE PROBLEMS IN THE FIELO OF OOCUMENTATION AND IN THE OPERATION OF INFORMATION SYSTEMS WHICH COULO POSSIBLY BE SOLVEO OR ALLEVIATEO BY SOME GREATER MEASURE OF COOPERATION, CONVERTIBILITY, OR COMPATIBILITY AMONG SYSTEMS, PARTICULARLY THOSE SYSTEMS FOR HANOLING SCIENTIFIC ANO TECHNICAL INFORMATION SUPPORTEO IN WHOLE OR IN PART BY THE UNITEO STATES GOVERNMENT. AN ACCOUNT IS GIVEN OF EARLY OEVELOPMENTS ANO GENERAL BACKGROUND INFORMATION ABOUT ORGANIZATIONS ACTIVE IN COOPERATIVE OOCUMENTATION EFFORTS. CURRENT COOPERATIVE ACTIVITIES ARE THEN OISCUSSEO IN TERMS OF OISSEMINATION ANO PUBLICATION OF SECONOARY SOURCES, ACQUISITION AND EXCHANGE OF PUBLICATIONS, ANALYSIS ANO IDENTIFICATION, SYSTEMATIZATION ANO TERMINOLOGY CONTROL, STORAGE AND SEARCH, AND STANOAROIZATION. GENERAL PROBLEM AREAS, SPECIAL PROBLEMS CREATEO BY CHANGES IN THE NATURE OF THE OOCUMENTARY MATERIALS TO BE HANOLED ANO SPECIAL PROBLEMS RAISEO BY THE PROSPECTS FOR MECHANIZATION ARE THEN OISCUSSEO. A FINAL SECTION RAISES QUESTIONS WITH REGARD TO THE IMPLICATIONS FOR FUTURE PROGRESS.

66070001 GOLOMAN, A. J., ARTHUR M. HOBBS, L. JOEL, THE CONCEPT OF ATTACK WORTH OF TELECOMMUNICATIONS NETWORK ELEMENTS, OIV. 650, JUL 66, NBSR 9368, 11P

THIS REPORT OESCRIBES THE INITIAL STEPS IN THE OEVELOPMENT OF A METHOO FOR OETERMINING THE ATTRACTIVENESS TO ATTACK, BY A COST ANO VALUE CONSCIOUS ENEMY, OF COMMUNICATIONS ELEMENTS IN A COMMANO NETWORK. THE NETWORK IS REPRESENTEO IN ABSTRACT TERMS ANO TECHNIQUES ARE OUTLINEO FOR PROCEEOING FROM MEASURES OF (I) ATTACK COSTS (TO AN ENEMY) ANO (II) ATTACK CONSEQUENCES, TO (III) MEANINGFUL MEASURES OF OURABILITY OF NETWORK ELEMENTS, (IV) CALCULABLE 'OPTIMIZATION' RULES WHICH A COST AND VALUE CONSCIOUS ENEMY MIGHT USE IN SELECTING ELEMENTS FOR ATTACK, ANO (V) CRITERIA FOR THE AOEQUACY OF THE STRENGTH OF THE COMMUNICATIONS NETWORK OERIVEO FROM THE ATTACK RULES.

66072201 WEGSTEIN, J. H., JOHN F. RAFFERTY, J. CUNNINGHAM, PROGRAMMEO TEACHING AND TESTING WITH A OIGITAL COMPUTER, OIV. 600, 22 JUL 66, NBSR 9372, 6P

THE TIME-SHAREO CENTRAL COMPUTER SERVING A NUMBER OF REMOTE STATIONS, SUCH AS TELETYPEWRITERS, APPEARS TO BE COMING OF AGE. WHILE SOME OF THESE SYSTEMS ARE OEOICATEO TO SPECIAL APPLICATONS SUCH AS AIRLINE RESERVATIONS, OTHERS ARE GENERAL PURPOSE. IN AOOITION TO SERVING AS GLORIFIEO CALCULATORS, SOME CAN ACCEPT FILES OR NAMED BLOCKS OF INFORMATION. SEATEO AT A REMOTE STATION, A USER CAN STORE, RETRIEVE, ANO MANIPULATE INFORMATION ANO THIS FACILITY LEAOS TO NEW ANO PROMISING COMPUTER APPLICATIONS. THIS PAPER OESCRIBES ONE SUCH APPLICATION.

66080001 GLOBER, GEORGE E., JR., PROGRESS REPORT ON THE OEVELOPMENT OF AUTOMATEO INFORMATION STORAGE, SELECTION ANO RETRIEVAL SYSTEMS FOR THE OUTOOOR RECREATION AREAS IN THE U. S., OIV. 640, AUG 66, NBSR 9414, 5P

IN EARLY 1964, THE BUREAU OF OUTDOOR RECREATION (BOR), U. S. DEPARTMENT OF INTERIOR, WITH THE ASSISTANCE OF NBS, INITIATED A PROJECT TO DEVELOP AN AUTOMATED INFORMATION PROCESSING SYSTEM OESIGN FOR COLLECTING AND OISSEMINATING DATA ON ALL PUBLIC U, S. RECREATION AREAS. THIS SYSTEM OESIGN IS INTENOEO TO HELP BOR FORMULATE A NATIONAL RECREATION PLAN.

THIS REPORT DISCUSSES THE WORK WHICH HAS BEEN DONE TO OATE ON THIS PROJECT BY PERSONNEL OF THE SYSTEM RESEARCH AND DEVELOPMENT DIVISION, CENTER FOR COMPUTER SCIENCES AND TECHNOLOGY, NBS. SPECIAL FORMS WERE OESIGNED TO COLLECT THE INFORMATION BOR DECIOED WAS NEEOEO. SAMPLES OF THE FORMS ANO TABLES GENERATEO FORM THE COLLECTEO OATA ARE INCLUDED AS APPENDICES TO THE REPORT.

66080002 FORBES, E. J., THOMAS C. BAGG, REPORT OF A STUDY OF REQUIREMENTS AND SPECIFICATIONS FOR SERIAL ANO MONOGRAPH MICRORECOROING FOR THE NATIONAL LIBRARY OF MEOICINE, DIV. 650, AUG 66, NBSR 9446, 100P

THIS INVESTIGATION HAS CONSIDERED THE PHOTOMETRIC CHARACTERISTICS OF THE INFORMATION TO BE RECOROEO, AS WELL AS THE SIZE, CONDITION, ANO USAGE OF THE COLLECTIONS OF THE NATIONAL LIBRARY OF MEDICINE (NLM) WHICH MUST BE MICROFILMED FOR PRESERVATION PURPOSES.

SINCE HIGH QUALITY COMMERCIAL MICROPHOTOGRAPHIC PRODUCTION CAPABILITIES WILL BE NEEDED FOR THE LIBRARY'S PRESERVATION MICRORECORDING, IT WAS NECESSARY TO STUOY THE PRODUCTION PERFORMANCE OF NLM'S MICROFILMING EQUIPMENT ANO THAT OF TWO OTHER LARGE-VOLUME HIGH QUALITY MICROFILM PRODUCTION SYSTEMS IN THE FEDERAL GOVERNMENT, THE MICROCORO INSTALLATIONS OF NBS'S FEDERAL CLEARINGHOUSE FOR SCIENTIFIC AND TECHNICAL INFORMATION (DIAZO MICROFICHE) AND OF THE ATOMIC ENERGY COMMISSION (SILVER HALIDE MICROFICHE). THEIR PRODUCTION PERFORMANCE WAS MEASURED AND THE RESULTS COMPARED WITH THE PERFORMANCE PREDICTED FOR THE WIDE VARIETY OF NLM MATERIALS.

THE REPORT CONCLUOES WITH A DESCRIPTION OF THE NECESSARY STEPS FOR IMMEOIATE IMPLEMENTATION AND WITH PROPOSED SPECIFICATIONS FOR THE NLM MICROCORO PREPARATION. A MAXIMUM ALLOWABLE MICROREDUCTION OF 12X AND AMERICAN STANDARDS ASSOCIATION 35MM MICROFILM FORMATS 2A, 2B, AND 1A ARE RECOMMENDED. COMPATABILITY WITH THE COSATI MICROFICHE AND WITH 16MM FILM SYSTEMS ARE POSSIBLE.

66080101 MONTAGUE, N. CARLTON, EXPERIMENTAL DISPLAY SUBSYSTEM, DIV. 650, 1 AUG 66, NBSR 9345, 22P

THE COMPUTER TECHNOLOGY SECTION OF THE CENTER FOR COMPUTER SCIENCES AND TECHNOLOGY HAS IMPLEMENTED AN EXPERIMENTAL DISPLAY SUB-SYSTEM UNDER THE PARTIAL SUPPORT OF NASA. THE PRIMARY PURPOSE OF THIS SUB-SYSTEM IS TO INVESTIGATE VARIOUS DIGITAL AND ANALOG CIRCUITS ANO DISPLAY MEDIA.

THE SYSTEM IS IMPLEMENTED AROUND A SMALL CORE MEMORY WITH AN OSCILLATOR CONTROLLED DRIVING SYSTEM. THE WORD ORGANIZATION IS 512 SIX-BIT WORDS. A SMALL KEYBOARD WITH ONLINE INDICATORS FURNISHES A FLEXIBLE MEANS OF ENTRY AND MODIFICATION OF MEMORY INFORMATION. THE PRIMARY PURPOSE OF THIS REPORT IS TO DOCUMENT THE ENGINEERING OETAILS OF THE MAJOR COMPONENTS AND OPERATION OF THE SUBSYSTEM.

66092201 PYKE, THOMAS N., JR., CORD--A TIME-SHARING EXECUTIVE FOR A RESEARCH FACILITY, OIV. 650, 22 SEP 66, NBSR 9423, 11P

CORD IS AN OPERATING SYSTEM FOR A COMPUTER WITH ON-LINE REMOTE DEVICES. IT IS AN EXECUTIVE PROGRAM FOR A TIME-SHARED COMPUTER SYSTEM WHICH SERVES SEVERAL REMOTE TERMINALS OPERATING IN A RESEARCH AND OEVELOPMENT FACILITY. A GENERAL EXECUTIVE THAT SATISFIES THE REQUIREMENTS OF A VARIETY OF EXPERIMENTAL TERMINALS HAS BEEN DEVELOPED. THE GENERALIZEO SYSTEM PROVIDES THE FLEXIBILITY NECESSARY FOR RESEARCH IN MAN-MACHINE COMMUNICATION UTILIZING A VARIETY OF DEVICES CONNECTED TO A COMPUTER SYSTEM.

67010001 TAUBER, STEPHEN J., GLORIA R. BOLOTSKY, GEORGE F. FRACTION, P. A. D. DE MAINE, HERBERT J. FRIEDMAN, C. L. KIRBY, BEATRICE A. S. MARRON, G. K. SPRINGER, JUSTIN C. WALKER, PROGRESS IN TECHNIQUES FOR MANIPULATING AND ORGANIZING CHEMICAL INFORMATION, DIV. 640, JAN 67, NBSR 9587, 210P

THIS REPORT DESCRIBES THE PROGRESS MADE OURING THE PERIOD OF SEPTEMBER 1965 TO SEPTEMBER 1966 IN A PROGRAM FOR THE DEVELOPMENT OF TECHNIQUES TO FACILITATE THE AUTOMATIC STORAGE, MANIPULATION, AND RETRIEVAL OF CHEMICAL INFORMATION. WORK

OESCRIBED IN THIS REPORT INVOLVED BOTH CONCEPTUAL WORK AND PRACTICAL EXPERIMENTATION WITH COMPUTERS. MUCH OF THE WORK WAS DONE WITH THE NBS PILOT COMPUTER FACILITY, PART WITH AN IBM 1410 AND, MORE RECENTLY, WITH AN IBM 360/40.

67010701 REITWIESNER, GEORGE W., A COMPUTER TEST PROGRAM TO ASSESS AOROITNESS IN INOEXING OPERATIONS, OIV, 600, 3 JAN 67, NBSR 9470

THIS REPORT DESCRIBES A TEST PROGRAM FOR A COMPUTER. IT IS CONCERNED NOT WITH SPECIFIC MEASUREMENTS TAKEN, BUT RATHER WITH A PROCEDURE FOR MAKING A MEASUREMENT REGARDING A SPECIFIC PROPERTY OF COMPUTER OPERATION. THE OBJECT OF THE TEST IS TO ACCESS ADROITNESS IN CERTAIN INOEXING OPERATIONS. ASSESSMENT IS ACCOMPLISHED BY MEASURING TIME OF EXECUTION OF A PARTICULAR RECURSIVE PROGRAMMING LOOP.

67021501 RYKE, THOMAS N., JR., THE NBS CORO TIME-SHARING SYSTEM - A REFERENCE MANUAL, OIV, 650, 15 FEB 67, NBSR 9495, 27P

CORO IS AN OPERATING SYSTEM FOR A COMPUTER WITH ON-LINE REMOTE OEVICES. THE SYSTEM CONSISTS OF AN EXECUTIVE PROGRAM OESIGNED TO ENABLE THE OUAL-PROCESSOR MOBIOIC COMPUTER FACILITY WITH MULTIPLE REMOTE TERMINALS TO OPERATE IN A TIME-SHARED MODE. AT EACH OF A NUMBER OF REMOTE TERMINALS, INCLUDING TELETYPES AND OISPLAYS, PROGRAMS AND OATA CAN BE ENTERED INTO THE SYSTEM, PROGRAM EXECUTION INITIATED, AND RESULTS RETURNED TO THE TERMINALS. A OATA BASE IS AVAILABLE TO ALL USERS THROUGH THE SYSTEM.

THIS REFERENCE MANUAL CONTAINS ALL THE NECESSARY INFORMATION FOR USE OF THE CORO SYSTEM FROM A TELETYPE TERMINAL. ALTHOUGH DESIGNED TO BE ACCOMPANIED BY A SHORT COURSE ON THE SYSTEM, MOST OF THE MANUAL IS SELF-EXPLANATORY.

67030101 SEVERO, ARMANOO, MAI LIIS JOEL, SYSTEMS OESIGN FOR THE SELECTIVE INFORMATION EXTRACTOR PROTOTYPE, OIV, 640, NBSR 9538, 50P, 6 REFS

THIS REPORT OESCRIBES THE SYSTEM OESIGN FOR THE SELECTIVE INFORMATION EXTRACTOR PROTOTYPE. THE PURPOSE OF THIS SYSTEM IS TO PROVIOE A SIMPLE LANGUAGE TO ENABLE NON-PROGRAMMER USERS OF LARGE FILES TO QUERY THEIR FILES AND TO PROOUCE OUTPUT. IN ORDER TO ACHIEVE MACHINE-INOEPENOENCE THE SIE SYSTEM IS BEING PROGRAMMED IN COBOL.

67040001 RANKIN, KIRK, STEPHANIE SIEGEL, CHINESE CHARACTER ANALYSIS, OIV, 640, NBSR 9537, 191P, 9 REFS

THE RESEARCH OESCRIBED IN THIS REPORT OEALS WITH THE TASK OF ANALYZING THE PICTORIAL STRUCTURE OF CHINESE CHARACTERS. THE APPROACH TOWARD THE PROBLEM IS ESSENTIALLY THAT OF LINGUISTIC ANALYSIS, AS PERFORMED IN NATURAL LANGUAGE STUDY. THE RESEARCH INCLUDES THE FOLLOWING AREAS: (1) CONSTRUCTION OF GRAMMARS FOR GENERATING CHINESE CHARACTERS IN TERMS OF THE COMBINATION OF COMPONENTS. (2) AN EXTENDED STUDY OF COMPONENT COMBINATION INVOLVING THE FORMULATION OF TWO OIFFERENT TYPES OF STRUCTURAL OESCRIPTIONS FOR CHINESE CHARACTERS. (3) ANALYSIS OF CHINESE CHARACTERS VIA A CENTER/ADJUNCT OESCRIPTIVE FRAMEWORK, (4) LINGUISTIC ANALYSIS OF STROKE PHENOMENA IN CHINESE CHARACTERS.

67040701 STEVENS, MARY ELIZABETH, JOHN L, LITTLE, AUTOMATIC TYPOGRAPHIC-QUALITY TYPESETTING TECHNIQUES: A STATE-OF-THE-ART REVIEW AUTOMATIC TYPOGRAPHIC-QUALITY TYPESETTING TECHNIQUES: A STATE-OF-THE-ART REVIEW, OIV, 600, 7 APR 67, MONO-99, (LC 66-62198), 98P, 363 REFS

THIS REPORT OESCRIBES THE CURRENT STATE-OF-THE-ART IN AUTOMATION OF GRAPHIC ARTS COMPOSITION. STARTING FROM EITHER OF TWO SOURCES: (1) KEYBOARD ENTRY OF MANUSCRIPT MATERIAL, OR (2) MECHANIZED INPUT IN THE FORM OF AVAILABLE PERFORATED TAPES OR MAGNETIC TAPES, THE GAMUT IS COVERED FROM ONE EXTREME IN WHICH A SKILLED KEYBOARD OPERATOR PERFORMS ALL OF THE COMPOSITOR FUNCTIONS REQUIRED TO OPERATE A TYPESETTING MACHINE TO THE OTHER EXTREME IN WHICH THE INPUT MERELY PROVIDES TEXT WHETHER OR NOT INCLUDING OESIGNATION OF OESIRED FONT CHANGES, FOLLOWED BY A HIGH OEGREE OF AUTOMATION THROUGH ALL OPERATIONS LEADING TO TYPE SET FOR PRINTING. INTERMEDIATE AUTOMATION AIDS FOR THE COMPOSITOR FUNCTIONS, INCLUDING CHARACTERISTICS OF SPECIAL-PURPOSE OIGITAL COMPUTERS AND FUNCTIONS PERFORMED BY TYPOGRAPHY PROGRAMS FOR GENERAL-PURPOSE OIGITAL COMPUTERS, ARE REVIEWED.

CHARACTERISTICS OF AUTOMATICALLY OPERATED TYPESETTING MECHANISMS, INCLUDING HOT METAL CASTING MACHINES AND

PHOTOCOMPOSERS SLOW, MEDIUM AND HIGH SPEED, ARE OUTLINED. APPLICATIONS OF NEW TECHNIQUES FOR TYPOGRAPHIC-QUALITY AUTOMATED COMPOSITION THAT ARE OF INTEREST IN SCIENTIFIC AND TECHNICAL INFORMATION CENTERS, LIBRARIES AND OTHER DOCUMENTATION OPERATIONS INCLUDE SEQUENTIAL CARD CAMERA LISTINGS, COMPUTER-GENERATED KWIC INDEXES, PHOTOCOMPOSITION OF TECHNICAL JOURNALS, AUTOMATIC COMPOSITION OF BOOKS CONTAINING BOTH COMPUTER-PRODUCED TABULAR DATA AND NATURAL LANGUAGE TEXTS, AND THE INCORPORATION OF MECHANIZED PROCESSES THROUGHOUT THE PUBLICATION CYCLE FROM THE AUTHOR'S ORIGINAL MANUSCRIPT PREPARATION TO THE FINAL PRINTING. A BIBLIOGRAPHY OF 363 REFERENCES IS INCLUDED.

67052601 BOYLE, DON R., ROBERT J. CARPENTER, WIDE BAND, LARGE DYNAMIC RANGE EMP RECEIVER, DIV. 650, 26 MAY 67, NBSR 9556, 20P

IN ORDER TO COLLECT INFORMATION ON NATURALLY OCCURRING ELECTRO-MAGNETIC PULSE SIGNALS HAVING SIMILAR CHARACTERISTICS, A WIDE BAND, LARGE DYNAMIC RANGE EMP RECEIVER WAS BUILT. ITS PASSBAND IS APPROXIMATELY 100KHZ TO 100MHZ WITH A 60 DB DYNAMIC RANGE. THIS REPORT GIVES A GENERAL DESCRIPTION OF THE EMP RECEIVER, DISCUSSES THE CALIBRATION OF THE EMP SYSTEM AND GIVES A DETAILED DESCRIPTION OF THE ANTENNA, ANTENNA COUPLER, POWER DIVIDER, WIDE BAND AMPLIFIER, SIGNAL SAMPLING 'T', THRESHOLD DETERMINATION, TEST SIGNAL GENERATOR AND THE PANEL LAYOUTS.

67061301 STEIN, PHILIP G., AUTOMATIC DATA GATHERING IN PRECISE LABORATORY EXPERIMENTS, DIV. 650, JUN 67, NBSR 9555, 46P

AFTER A BRIEF TREATMENT OF THE MATHEMATICAL FOUNDATIONS OF AUTOMATIC MEASUREMENTS, THIS PAPER SURVEYS THESE AUTOMATIC MEASUREMENT INSTRUMENTS AS THEY NOW EXIST AND INVESTIGATES AREAS IN WHICH FURTHER WORK MIGHT IMPROVE THEIR PERFORMANCE. THE PAPER ALSO DISCUSSES THE USES OF COMPUTERS IN THE LABORATORY, THE FUNCTIONS THEY NOW ARE ABLE TO PERFORM AND SOME OF THE FUNCTIONS WHICH MAY BE PERFORMED IN THE FUTURE.

67080001 STEIN, PHILIP G., SHIFTING BUFFER MODULE, DIV. 650, AUG 67, NBSR 9602, 34P

THIS REPORT DESCRIBES VARIOUS ASPECTS OF A SHIFTING BUFFER MODULE INCLUDING ITS FUNCTION, CONSTRUCTION, INSTALLATION, OPERATION AND MAINTENANCE. THIS MODULE STORES 64 BITS OF BINARY INFORMATION, USING HIGH-SPEED ELECTRONIC STORAGE CIRCUITS (FLIP-FLOPS). THESE BITS ARE NORMALLY CONSIDERED TO BE IN GROUPS OF 4 EACH, AND SUCH GROUPS ARE REFERRED TO AS CHARACTERS./

67080002 STEIN, PHILIP G., BUFFER MULTIPLEXER MODULE, DIV. 650, AUG 67, NBSR 9603, 31P

THIS BUFFER MULTIPLEXER MODULE IS USED AS A DIGITAL DATA SWITCH. IT CAN ACCEPT FOUR BINARY OR BINARY-CODED-DECIMAL WORDS OF UP TO 32 BITS (EIGHT FOUR-BIT CHARACTERS, WITH COMPLEMENTS), AND CONNECT ANY ONE, OR NONE OF THEM TO ITS OUTPUT. THE SWITCHING CONFIGURATION IS THAT OF A 64-POLE, 4-POSITION PLUS OFF SWITCH. SINCE ALL SWITCHING IS DONE WITH DIGITAL LOGIC CIRCUITRY, IT IS NOT SUITABLE FOR USE WITH DIGITAL DATA. THE FUNCTION OF THE MODULE, ITS CONSTRUCTION, COMPONENTS, PRINCIPLES OF OPERATION AND MAINTENANCE ARE DESCRIBED IN THIS REPORT.

67081501 DE MAINE, P. A. D., BEATRICE A. S. MARRON, K. KLOSS, PART I - THE SOLID SYSTEM, II. NUMERIC COMPRESSION, PART II - THE SOLID SYSTEM, III. ALPHANUMERIC COMPRESSION, DIV. 640, 15 AUG 67, TN-413, NSF GN-455, 42P, 11 REFS

PART I OF NBS TECHNICAL NOTE 413 DESCRIBES THE GENERAL NUMERIC COMPRESSOR (NUPAK) ALGORITHM FOR AUTOMATICALLY COMPRESSING (ENCODING) OR DECODING COMPRESSED NUMERICAL INFORMATION, WHICH MAY OF COURSE HAVE COME FROM GRAPHICAL INFORMATION. THE AMOUNT OF COMPRESSION ACHIEVED IS DETERMINED BY THE 'LOWEST LIMIT OF SIGNIFICANCE,' THE RANGE, AND THE SEQUENTIAL PATTERNS OF THE DATA TO BE STORED. THE ENCODED INFORMATION CAN BE STORED IN MEMORY OR ON EXTERNAL STORAGE DEVICES IN A SMALL FRACTION OF THE SPACE NORMALLY REQUIRED, AND CAN BE EXPANDED (DECODED) ITEM-BY-ITEM WHENEVER NEEDED BY THE SYSTEM.

PART II DESCRIBES AN ALGORITHM FOR COMPRESSING ALPHANUMERIC INFORMATION, UNLIKE OTHER METHODS WHICH DEPEND UPON FREQUENCY OF OCCURRENCE OF WORDS IN A PARTICULAR CLASS OF PUBLICATIONS, THIS SCHEME IS LANGUAGE AND CONTENT INDEPENDENT SINCE THE INFORMATION FOR COMPRESSION IS OBTAINED FROM THE TEXT ITSELF, THE COMPRESSED BIT STREAM IS PRECEDED BY SUFFICIENT INFORMATION FOR AUTOMATIC RECONSTRUCTION OF THE ORIGINAL BIT STREAM WHENEVER THE SYSTEM REQUIRES IT. EVEN WITH THIS ADDITIONAL INFORMATION REQUIRED FOR EXPANSION, COMPRESSION RATES APPROACHING

40% HAVE BEEN ACHIEVED. BECAUSE THIS ALPHANUMERIC COMPRESSOR (ANPAK) IS FULLY AUTOMATIC AND SELF-ORGANIZING, IT CAN OPERATE ON INFORMATION WHICH HAS ALREADY BEEN COMPRESSED VIA THE NUMERIC COMPRESSOR (NUPAK).

67061S03 CURTIS, C. A., CAS - THE CORD ASSEMBLY SYSTEM. ASSEMBLY LANGUAGE FOR THE NBS CORD TIME-SHARING SYSTEM, DIV. 6S0, 1S AUG 67, NBSR 9641, 66P

CAS (CORD ASSEMBLY SYSTEM) IS A CONVERSATIONAL ASSEMBLER WHICH HAS BEEN IMPLEMENTED ON THE NBS CORD TIME-SHARING SYSTEM AND WHICH RUNS UNDER THE CORD EXECUTIVE SYSTEM. SOME SPECIFIC FEATURES OF CAS ARE ITS ABILITY TO ASSEMBLE SYSTEM COMMAND CALLS AND THE DYNAMIC ALLOCATION OF MEMORY FOR SYMBOL, LITERAL AND FORWARD REFERENCE LISTS. IT IS ALSO ABLE TO HANDLE FORWARD REFERENCING AND IS A RE-ENTRANT SYSTEM. THIS REPORT DESCRIBES THE BASIC FEATURES OF CAS INCLUDING THE USER'S VIEW OF CAS, THE CAS INPUT FORMAT AND THE IMPLEMEMTATION OF THE ASSEMBLY PROCESS.

67120001 HENDERSON, MADELINE M., EVALUATION OF INFORMATION SYSTEMS: A SELECTED BIBLIOGRAPHY WITH INFORMATIVE ABSTRACTS, DIV. 660, DEC 1967, TN-297, 209P, 429 REFS

A SURVEY OF THE LITERATURE ON EVALUATION OF INFORMATION SYSTEMS HAS BEEN CONDUCTED BY THE TECHNICAL INFORMATION EXCHANGE, CENTER FOR COMPUTER SCIENCES AND TECHNOLOGY, NATIONAL BUREAU OF STANDARDS. DURING THE EARLY STAGES OF THE SURVEY, THE LITERATURE WAS DIVIDED AMONG DESCRIPTIONS OF PROGRAMS WHICH COMPARED THE PERFORMANCE OF TWO OR MORE INFORMATION SYSTEMS, ACCOUNTS OF PROGRAMS WHICH STUDIED THE PERFORMANCE OF ONE SYSTEM, PAPERS AND REPORTS WHICH DISCUSSED THE PROBLEMS OF EVALUATION PROGRAMS, AND DOCUMENTS WHICH PROPOSED NEW TECHNIQUES FOR EVALUATION OF SYSTEMS. FROM THE TOTAL LITERATURE COLLECTED, THOSE REFERENCES WHICH WERE JUDGED TO BE MOST DIRECTLY CONCERNED WITH THE SUBJECT OF EVALUATION OF INFORMATION SYSTEMS WERE SELECTED AND ABSTRACTED. THE ABSTRACTS ARE DESIGNED TO GIVE A SUMMARY OF THE CONTENT OF THE CORRESPONDING PAPER; THE AUTHOR'S OWN WORDING WAS USED EXTENSIVELY, IN ORDER TO AVOID MISINTERPRETATION. ALL OF THE REFERENCES COLLECTED ARE LISTED, IN ALPHABETIC ORDER OF AUTHORS' NAMES, IN THE APPENDIX TO THE MAIN BODY OF THIS PUBLICATION.

67120002 STEIN, PHILIP G., A COMPUTER-CONTROLLED CALIBRATOR FOR RADIO-FREQUENCY RECEIVERS, SYSTEM CONSTRUCTION AND OPERATION, DIV. 650, DEC 67, NBSR 9663, 118P

THIS REPORT DESCRIBES THE TECHNICAL DETAILS OF A COMPUTER CONTROLLED CALIBRATOR FOR RADIO-FREQUENCY RECEIVERS CONSTRUCTED AT NBS. IT IS INTENDED TO BE USED IN CONJUNCTION WITH THE FOLLOWING NBS REPORTS: 'A COMPUTER CONTROLLED CALIBRATOR FOR RADIO-FREQUENCY RECEIVERS. SYSTEM DESCRIPTION AND PROGRAMMING' (NBSR 9662), 'SHIFTING BUFFER MODULE' (NBSR 9602) AND 'BUFFER MULTIPLEXER MODULE' (NBSR 9603).

67120010 STEIN, PHILIP G., A COMPUTER-CONTROLLED CALIBRATOR FOR RADIO-FREQUENCY RECEIVERS. SYSTEM DESCRIPTION AND PROGRAMMING, DIV. 6S0, DEC 67, NBSR 9662, 14P

A COMPUTER-CONTROLLED RF SIGNAL GENERATOR HAS BEEN BUILT AT THE NATIONAL BUREAU OF STANDARDS. IT IS CAPABLE OF GENERATING A SERIES OF PROGRAMMED FREQUENCIES, EACH FOR A PROGRAMMED LENGTH OF TIME. UP TO 24 RECEIVERS MAY BE ACCOMMODATED. THE SYSTEM OPERATES UNDER DIRECT COMPUTER SUPERVISION, OR IN A STAND-ALONE MODE IN WHICH ALL NECESSARY CALIBRATION INFORMATION IS READ FROM PUNCHED PAPER TAPE. A DESCRIPTION OF THE SYSTEM INCLUDING PROGRAMMING AND CONSTRUCTION INFORMATION IS GIVEN IN THIS REPORT.

67121301 PALOMBO, LOUIS J., TELETYPE WAVEFORM RECEIVING SYSTEM, DIV. 650, 13 DEC 67, NBSR 9887, 22P

THE TELETYPE WAVEFORM RECEIVING SYSTEM PROVIDES A MEANS FOR RECEIVING ANALOG WAVEFORM RECORDS OVER CONVENTIONAL TELETYPEWRITER CIRCUITS IN ADDITION TO NORMAL TWO-WAY ALPHANUMERIC COMMUNICATIONS. TWO MODES OF OPERATION ARE PROVIDED. IN THE NORMAL (PRINT) MODE, THE USUAL KEYBOARD-TELEPRINTER OPERATIONS ARE PROVIDED. IN THE PLOT MODE, THE BINARY VALUE OF EACH INCOMING CHARACTER IS CONVERTED TO AN ANALOG VOLTAGE AND INPUT TO A STRIP CHART RECORDER. THE SYSTEM IS COMPOSED OF COMMERCIALLY AVAILABLE COMPONENTS MODIFIED BY THE ADDITION OF A 'STUNT BOX'. THE WAVEFORM RECEIVER. THE ACCOMMODATES THIS MODE SHIFTING AND CONTROL FUNCTIONS AND THE DIGITAL-TO-ANALOG CONVERSION OF INCOMING

DATA. THE SYSTEM PROVIDES A MEANS FOR REMOTELY DISPLAYING COMPUTER GENERATED GRAPHS ON WAVEFORM RECORDS AND HAS POTENTIAL UTILITY IN MANY TYPES OF REMOTE TERMINAL DATA PROCESSING APPLICATIONS.

68010001 ST. CLAIR, J. MICHAEL, THE ORGANIZATION AND PROGRAMMING OF A COMPUTER CONTROLLED SCANNER (FOSDIC VI), DIV. 650, JAN 68, NBSR 9805, 44P, 17 REFS

THE FOSDIC VI ELECTRONIC SCANNER SYSTEM (FILM OPTICAL SENSING DEVICE FOR INPUT TO COMPUTERS) IS A GENERAL PURPOSE COMPUTER-CONTROLLED FLYING-SPOT SCANNER. THE CENTRAL ELEMENT OF FOSDIC VI IS AN ELECTRONIC SCANNING ASSEMBLY. THE SYSTEM HAS COMPATIBILITY WITH THE FOSDIC V SCANNER INCORPORATED IN THE ACCESS (AUTOMATIC COMPUTER CONTROLLED ELECTRONIC SCANNING SYSTEM) FOR DATA ACQUISITION FROM QUESTIONAIRE TYPE DOCUMENTS. FOSDIC VI IS ALSO CAPABLE OF SCANNING TWO-DIMENSIONAL INFORMATION OF A MORE GENERAL NATURE. THIS REPORT DISCUSSES THE SCANNING CAPABILITIES, SYSTEM ORGANIZATION, INTERFACE REQUIREMENTS, CONVERSATIONAL PROGRAMMING LANGUAGE, PROGRAMMING TECHNIQUES AND APPLICATIONS OF FOSDIC VI.

68020001 LEE, RICHARD W. H., ROY W. WORRAL, ELECTRONIC COMPOSITION IN PRINTING, PROCEEDINGS OF A SYMPOSIUM, NATIONAL BUREAU OF STANDARDS, JUNE 15-16, 1967, DIV. 600, FEB 68, NBS-SP-295, (LC 68-60021), 128P

A SYMPOSIUM ON ELECTRONIC COMPOSITION IN PRINTING WAS HELD AT THE GAITHERSBURG LABORATORIES OF THE NATIONAL BUREAU OF STANDARDS JUNE 15 AND 16, 1967. SPONSORED BY THE NBS CENTER FOR COMPUTER SCIENCES AND TECHNOLOGY, THE SYMPOSIUM WAS A STATE-OF-THE-ART REVIEW OF A RAPIDLY ADVANCING FIELS OF COMPUTER APPLICATION WITH POTENTIALITIES FOR INCREASED EFFICIENCY AND SAVINGS IN THE FEDERAL GOVERNMENT.

TWENTY-NINE PAPERS WERE PRESENTED AND ARE PUBLISHED IN THIS PROCEEDINGS. THEY INCLUDE A DIVERSE GROUP BY INDUSTRY REPRESENTATIVES REPORTING RECENT TECHNOLOGICAL ADVANCEMENTS IN THE FIELD. SEVERAL PAPERS DEFINE GOVERNMENT POLICY AND DESCRIBE THE NEW LINOTRON SYSTEM OF PHOTOCOMPOSITION AT THE GOVERNMENT PRINTING OFFICE; ANOTHER SERIES IS DEVOTED TO NONGOVERNMENT APPLICATIONS AND RESEARCH; AND A FINAL GROUP DETAILS SPECIFIC APPLICATIONS WITHIN SEVERAL GOVERNMENT AGENCIES.

68030001 MOORE, R. T., K. M. GRAY, ELECTROMAGNETIC PULSE SIGNALS CLASSIFICATION AND IDENTIFICATION OF NEARBY SFERICS IN THE HIGH ALTITUDE NUCLEAR DETECTION STUDIES (HANDS) PROGRAM - VOLUME II, DIV. 650, MAR 68, NBSR 9839, 58P

ELECTROMAGNETIC PULSE SIGNALS FROM CERTAIN CLASSES OF NUCLEAR EVENTS, IN TERMS OF HEIGHT OF BURST AND DISTANCE, HAVE FEATURES WHICH AFFORD A MEANS OF RECOGNITION. SIMILAR FEATURES ARE ALSO OBSERVED IN ATMOSPHERICS, BUT THESE HAVE A SMALLER NORMALIZED SOURCE FUNCTION AMPLITUDE. AN EXPERIMENT WAS CONDUCTED TO INVESTIGATE THE FEASIBILITY OF MEASURING THE DISTANCE TO NEARBY SFERICS USING AZIMUTH AND AMPLITUDE DATA OBSERVED AT TWO SITES SEPARATED BY A FEW KILOMETERS.

THE RATIONALE FOR THE DESIGN OF THE EXPERIMENTAL PLAN TO COLLECT DATA FOR THE CLASSIFICATION AND IDENTIFICATION OF NEARBY SFERICS WAS DESCRIBED IN VOLUME I. THIS REPORT, VOLUME II, CONTAINS A BRIEF OUTLINE OF THE EQUIPMENT CONFIGURATION, A DESCRIPTION OF THE SYSTEM CALIBRATION, THE EXPERIMENTAL RESULTS, CONCLUSIONS OF THE EXPERIMENT AND A SAMPLE OF THE DATA COLLECTED.

68030002 WEGSTEIN, J. H., A COMPUTER ORIENTED SINGLE FINGERPRINT IDENTIFICATION SYSTEM, DIV. 600, MAR 63, TN-443, 27P

A PROCEDURE IS DESCRIBED FOR COMPUTING A SET OF NUMERICAL DESCRIPTORS THAT IDENTIFY A SINGLE FINGERPRINT. THE PROCEDURE STARTS WITH X AND Y COORDINATES AND THE INDIVIDUAL DIRECTIONS OF THE MINUTIAE (RIDGE ENDINGS AND BIFURCATIONS) OF A FINGERPRINT IMPRESSION. SETS OF DESCRIPTORS ARE COMPUTED CORRESPONDING TO GROUPS OR CONSTELLATIONS OF THESE MINUTIAE. DESCRIPTORS CORRESPONDING TO VARIOUS FINGERPRINT IMPRESSIONS ARE STORED ON MAGNETIC TAPE. A FRAGMENT OF A FINGERPRINT IMPRESSION SUCH AS OCCURS IN A LATENT FINGERPRINT MAY ALSO BE USED.

A SECOND COMPUTER PROGRAM READS THE DESCRIPTORS CORRESPONDING TO TWO DIFFERENT FINGERPRINT IMPRESSIONS FROM MAGNETIC TAPE. A SCORE IS COMPUTED THAT INDICATES HOW WELL THE TWO IMPRESSIONS MATCH. PRELIMINARY EXPERIMENTAL RESULTS SUGGEST THAT THIS PROCEDURE MIGHT BE SUITABLE AS A BASIS FOR A SINGLE-FINGERPRINT CLASSIFICATION SYSTEM.

68050001 WORRAL, ROY W., ROBERTA H. LARKIN, STUDY OF AND EXPERIMENTATION IN COMPUTER COMPOSITION OF LIBRARY MATERIALS, DIV. 650, MAY 68, NBSR 9598, 76P

A PROJECT WAS ESTABLISHED BETWEEN THE COUNCIL ON LIBRARY RESOURCES AND NBS TO PROMOTE A COMPUTER TYPESETTING PROGRAM AND TO STUDY OTHER ASPECTS OF AUTOMATING LIBRARY PROCEDURES INCLUDING AUTOMATED PRINTING OF CATALOG CARDS AND OTHER PUBLISHED LIBRARY MATERIAL. THE REPORT DESCRIBES THE RESULTS OF 1) EXPERIMENTS IN THE APPLICATION OF BASIC AUTOSET COMPUTER TYPESETTING PROGRAMS TO A VARIETY OF LIBRARY PUBLICATIONS, 2) INVESTIGATION ON THE USE OF THE GOVERNMENT PRINTING OFFICE LINOTRON SYSTEM FOR LIBRARY APPLICATIONS, 3) CONSIDERATIONS FOR THE DESIGN OF FUTURE LIBRARY INFORMATION PHOTOCOMPOSITION SYSTEMS AND 4) EVALUATION OF CURRENTLY USED PHOTOCOMPOSITION EQUIPMENT AND SYSTEMS.

68070001 WEGSTEIN, J. H., JOHN F. RAFFERTY, WALTER J. PENCAK, MATCHING FINGERPRINTS BY COMPUTER, DIV. 600, JUL 68, TN-466, 16P

A PROCEDURE IS DESCRIBED FOR DETERMINING WHETHER TWO FINGERPRINT IMPRESSIONS WERE MADE BY THE SAME FINGER. THE PROCEDURE USES THE X AND Y COORDINATES AND THE INDIVIDUAL DIRECTIONS OF THE MINUTIAE (RIDGE ENDINGS AND BIFURCATIONS). THE IDENTITY OF TWO IMPRESSIONS IS ESTABLISHED BY MATCHING A CONSTELLATION OR GROUP OF MINUTIAE IN ONE IMPRESSION WITH A CORRESPONDING CONSTELLATION IN THE OTHER IMPRESSION IN TERMS OF THE RELATIVE DISTANCES AND RELATIVE ANGLES OF THE MINUTIAE./

68090001 TAUBER, STEPHEN J., GLORIA R. BOLOTSKY, ELIZABETH FONG, BARBARA F. N. FREY, HERBERT J. FRIEDMAN, RICHARD W. H. LEE, BEATRICE A. S. MARRON, SUSAN K. REED, A FILE SYSTEM FOR CHEMICAL AND BIOLOGICAL INFORMATION, DIV. 640, SEP 68, NBSR 9932, 174P

THIS REPORT IS A PROGRESS REPORT OF THE WORK ACCOMPLISHED ON A PHARMACOLOGICAL FILES PROJECT OURING FISCAL YEAR 1968. THE GOAL OF THE PROJECT WAS TO LOOK AT THE PROBLEM OF FACILITATING ACCESS TO CHEMICAL AND RELATED BIOLOGICAL INFORMATION BY EXPERIMENTAL CHEMISTS, BIOCHEMISTS AND PHARMACOLOGISTS. THIS REPORT INCLUDES A PHARMACOLOGICAL TERM LIST WHICH WAS DEVELOPED AND A LISTING OF COMPUTER ROUTINES WHICH WERE OPERATIONAL IN FY 68.

68090002 FRACTION, GEORGE F., JUSTIN C. WALKER, STEPHEN J. TAUBER, CONNECTION TABLES FROM WISWESSER CHEMICAL STRUCTURE NOTATIONS--A PARTIAL ALGORITHM, DIV. 640, SEP 68, TN-432, 63P

AN ALGORITHM HAS BEEN DEVELOPED FOR TRANSFORMING CERTAIN TYPES OF WISWESSER ORGANIC STRUCTURE NOTATIONS INTO CONNECTION TABLES. ACYCLIC AND BENZENE STRUCTURES ARE TREATED, AND PROVISION HAS BEEN MADE FOR ALL OF THE TYPES OF CONTRACTIONS USED BY THE WISWESSER NOTATION SYSTEM. A SEPARATE ALGORITHM IS PRESENTED FOR TREATING LINEARLY FUSED RING AGGREGATES. A SYNTAX HAS BEEN DEVELOPED TO DESCRIBE THOSE PORTIONS OF WISWESSER NOTATIONS WHICH REFER TO NON-BENZENE RING SYSTEMS.

68090003 DE MAINE, P. A. D., INPUT/OUTPUT PACKAGES FOR THE SYSTEMS 360 ASSEMBLY LANGUAGE PROCESSOR, DIV. 640, SEP 68, TN-433, 12, P

THREE INPUT-OUTPUT (I/O) SOFTWARE PACKAGES FOR USE WITH THE ASSEMBLY LANGUAGE PROCESSOR (ALP) OF THE SYSTEMS 360 ARE DESCRIBED. THEY ARE FOR CARD READ, ON-LINE-PRINT AND CARD PUNCH OPERATIONS. A SINGLE PSEUDO-OPERATION STATEMENT, WHICH CONTAINS ALL REQUIRED FORMATS AND ADDRESSES, SUFFICES FOR THE EXECUTION OF EACH INPUT-OUTPUT PACKAGE. PRINTED ERROR AND GUIDE MESSAGES AID IN PROGRAM DEBUGGING. IN ADDITION TO THE CONVENTIONAL FORMATS (A, I, F AND E), SYSTEMS 360 COLUMN BINARY (X) AND HEXADECIMAL (J AND B) ARE PERMITTED. WITH A SINGLE PSEUDO-OPERATION THESE I/O PACKAGES CAN HANDLE UP TO EIGHT INDIVIDUAL ITEMS OR ARRAYS OF ANY LENGTH IN A SINGLE OR MIXED FORMAT.

68092401 HOBBS, ARTHUR M., L. JOEL, USERS' MANUAL FOR THE PATHFINDING IMPORTANCE NUMBER GENERATOR, DIV. 630, 24 SEP 68, NBSR 9924, 44P

THE PURPOSE OF THE PROGRAMS DESCRIBED IN THIS REPORT IS TO GENERATE WHAT WILL BE CALLED IMPORTANCE NUMBERS FOR EACH OF THE ELEMENTS OF A COMMUNICATION GRID. THESE NUMBERS ARE BASED ON THE NETWORK CONFIGURATION AND ON COMMAND VALUES ASSIGNED BY THE USER OF THE PROGRAM TO EACH COMMANDER-SUBORDINATE PAIR OF SUBSCRIBERS WHO USE THE NETWORK FOR COMMUNICATIONS. THE NUMBERS GENERATED ARE CONSIDERED REPRESENTATIVE OF THE IMPORTANCE OF NETWORK ELEMENTS. AT LEAST WITH

RESPECT TD A RANK DRDERING.

68110001 PYKE, THDMAS N., JR., MAN-MACHINE SYSTEM ORGANIZATION. FINAL REPDRT - PHASE I, DIV. 650, NDV 68, NBSR I0 051, 49P, 10 REFS

A PRDJECT WAS ESTABLISHED TD SUPPDRT WDRK IN CDMPUTER GRAPHICS CONCERNED WITH HARDWARE AND SOFTWARE TECHNIQUES FDR IMPLEMENTING GRAPHICALLY-DRIENTED TIME-SHARING SYSTEMS AND THE USE DF PDINTING DEVICES FDR INPUT WITH SUCH SYSTEMS. THIS REPDRT CDNTAINS DBSERVATIDNS MADE DURING THE FIRST PHASE DF THE PRDJECT INCLUDING ANALYSIS DF SYSTEMS FDR CDMPUTER GRAPHICS, DATA MANAGEMENT IN SUPPDRT DF CDMPUTER GRAPHICS AND THE NBS CDMPUTER RESEARCH FACILITY. DF PARTICULAR INTEREST IS A SUMMARY DF CDNSIDERATIDNS AFFECTING THE USE DF LDCAL CDMPUTERS TD DRIVE GRAPHICAL DISPLAYS, INCLUDING THE USE DF ANTICIPATDRY TECHNIQUES.

68110002 STEVENS, MARY ELIZABETH, NDNNUMERIC DATA PRDCESSING IN EURDPE: A FIELD TRIP REPDRT, DIV. 600, NDV 68, TN-462, 63P

A NUMBER DF NDNNUMERIC DATA PRDCESSING PRDJECTS IN THE UNITED KINGDDM, BELGIUM, THE NETHERLANDS, ITALY, SWEDEN, THE FEDERAL REPUBLIC DF GERMANY, AND THE U.S.S.R. HAVE BEEN VISITED. TDPICS CDVERED INCLUDE CHARACTER AND PATTERN RECDGNITIDN; SPEECH ANALYSIS, SYNTHESIS, AND RECDGNITIDN; ARTIFICIAL INTELLIGENCE; MECHANIZED DDCUMENTATIDN AND LIBRARY AUTDMATIDN; LINGUISTIC DATA PRDCESSING, AND CDMPUTING AND PRDGRAMMING THEDRY.

68110101 SIEGLER, RICHARD A., THE CL6 CDNVERSATIDNAL LIST PRDCESSING SYSTEM--A USER'S MANUAL, DIV. 650, I NDV 68, NBSR 9966, 64P, 2 REFS

CL6 IS A LIST PRDCESSING SYSTEM IMPLEMENTED UNDER THE NBS CDRD TIME-SHARING SYSTEM. IT IS A CDNVERSATIDNAL VERSIDN DF L6, THE LDW-LEVEL LINKED LIST LANGUAGE, DEVELDPED BY BELL TELEPHDNE LABDRATORIES. CL6 INCDRPORATES CDMPILATIDN, EXECUTIDN AND DEBUGGING FACILITIES EMBEDDED IN AN INTERACTIVE SUPERVISDRY SYSTEM. THIS USER'S MANUAL GIVES A DESCRIPTIDN DF THE LANGUAGE INCLUDING DATA STRUCTURES AND NDTATIDN, LABELS, CDNDITIDNS, LITERALS, ELEMENTARY DPERATIDNS AND GD TD'S AND A DESCRIPTION OF THE CL6 SUPERVISDR INCLUDING PRDGRAM CDMPILATIDN, PRDGRAM EXECUTIDN, DEBUGGING AIDS, SYSTEM CDUNTERS, SUPERVISDR DRDERS, AND LINKAGE WITH DTHER PRDGRAMS.

68111501 HUDSDN, JERDME A., GRAS - A GRAPHICAL ASSEMBLER FDR MAGIC II, DIV. 650, I5 NDV 68, NBSR 9955, 47P

GRAS (GRAPHICAL ASSEMBLER) IS AN ASSEMBLY LANGUAGE FDR THE MAGIC II CDMPUTER. IT IS A DNE-TD-DNE ASSEMBLER IN THE SENSE THAT EACH LINE DF SDURCE CDDE PRDDUCES A SINGLE MACHINE INSTRUCTIDN DR IS A DIRECTIVE TD THE ASSEMBLER ITSELF. GRAS DPERATES DN THE MDBIDIC 8 CDMPUTER UNDER THE NBS CDRD TIME-SHARING SYSTEM. THIS REPDRT GIVES A DESCRIPTIDN DF GRAS, INSTRUCTIDNS FDR LDADING AND USING GRAS, MAGIC II MACHINE INSTRUCTIDNS AND DATA FDRMATS, ASSEMBLER INSTRUCTIDN FDRMATS, SPECIAL SYMBDLS, PSEUDD DPERATIONS AND ERRDR MANAGERS DF GRAS.

68111502 RIPPY, DDN E., MAGIC II, A REMDTE GRAPHIC DISPLAY TERMINAL, DIV. 650, 15 NDV 68, NBSR 9956, I09P

MAGIC II IS A REMDTE DISPLAY CDNSDLE CONSISTING DF A PRDCESSDR UNIT AND A DISPLAY UNIT WHICH INCLUDES A CRT DISPLAY, LIGHT PEN, JDYSTICK, GRAPHICAL TABLET AND PRDCESSDR CDNTRDLS. IT IS DESCRIBED IN THIS TWD PART REPDRT. PART I DESCRIBES BASIC SYSTEM DESIGN DBJECTIVES, DRGANIZATION AND CHARACTERISTICS DF THE MAGIC II REMDTE DISPLAY CDNSDLE. INCLUDED IS A DESCRIPTIDN DF THE DATA FDRMATS AND ADDITIDNAL RELATED INFDRMATIDN CDNCERNING THE USE AND PRDGRAMMING DF THE TERMINAL. PART II PRESENTS A CDMPLETE DESCRIPTIDN DF PRDGRAMMING CHARACTERISTICS AND MACHINE INSTRUCTIDNS.

68120001 YDUDEN, W. W., CDMPUTER LITERATURE BIBLIDGRAPHY, VDLUME 2: I964-I967, DIV. 650, DEC 68, NBS-SP-309, (LC 68-62478), 381P

THIS BIBLIDGRAPHY IS A CDNTINUATIDN DF 'COMPUTER LITERATURE BIBLIDGRAPHY, I946 TD I963,' AND IS INTENDED AS A FURTHER SERVICE TD THE CDMPUTER CDMMUNITY. IT CDNTAINS APPRDXIMATELY 5,200 REFERENCES TD CDMPUTER LITERATURE PUBLISHED DURING THE YEARS 1964 THRDUGH I967. THE BIBLIDGRAPHY SECTIDN INCLUDES THE FULL TITLE AND THE NAMES DF ALL THE AUTHDRS DF

EACH ITEM PUBLISHED IN 17 JOURNALS, 20 BOOKS COMPOSED OF CHAPTERS BY INDIVIDUAL AUTHORS, AND 43 CONFERENCE PROCEEDINGS. IN ADDITION, REFERENCES TO ALL ITEMS THAT WERE REVIEWED IN THE IEEE TRANSACTIONS ON ELECTRONIC COMPUTERS HAVE BEEN INCLUDED.

THE TITLE WORD INDEX SECTION PROVIDES THE MEANF FOR LOCATING AN ITEM IF ANY PART OF ITS TITLE IS KNOWN. LIKEWISE, IT CAN BE USED TO IDENTIFY ALL ITEMS WHOSE TITLES INCLUDE A PARTICULAR WORD OR PHRASE. THE AUTHOR INDEX SECTION LISTS ALL AUTHORS OF EACH ITEM, BUT DOES NOT INDICATE WHETHER AN AN INDIVIDUAL IS ITS SOLE AUTHOR.

69010601 HUDSON, JEROME A., RICHARD FREEMIRE, LISA MOCKETT, J. MICHAEL ST. CLAIR, A SET OF ELEMENTARY PICTURE PROCESSING ALGORITHMS, DIV. 650, 6 JAN 69, NBSR 9978, 16P, 6 REFS

A SET OF PICTURE PROCESSING PROGRAMS WAS DEVELOPED FOR THE UNIVAC 1108 TO ENABLE THE FOLLOWING OPERATIONS TO BE APPLIED TO A GRAY LEVEL PICTURE STORED AS AN ARRAY: 1) EDGE RECOGNITION, 2) CODING OF BOUNDARY INTO A SET OF DIRECTED LINE SEGMENTS, 3) EXTRACTION OF A SUB-PICTURE FROM ITS BACKGROUND, 4) INSERTION OF A FOREIGN OBJECT INTO A BACKGROUND, AND 5) SELECTIVE OBSCURATION OF DETAIL THROUGH RANDOM NOISE. A DESCRIPTION OF THE PROGRAMS IS GIVEN IN THIS REPORT.

69040001 MEISSNER, PAUL, O. E. HUMPHRIES, G. S. LANG, PRELIMINARY STUDY OF INTER-HOSPITAL COMMUNICATION INTERFACE - PHASE I, DIV. 650, APR 69, NBSR 10 084, 134P, 115 REFS

A PROJECT WAS ESTABLISHED BETWEEN THE U.S. PUBLIC HEALTH SERVICE AND NBS TO PROVIDE DESIGN CRITERIA FOR COMPUTER ASSISTED HOSPITAL INFORMATION SYSTEMS THAT WOULD PERMIT EACH INSTITUTION TO HAVE A CUSTOMIZED SYSTEM, YET ASSURE ITS COMPATIBILITY WITH OTHER EXISTING AND EMERGING SYSTEMS. THIS REPORT DESCRIBES PHASE I OF THE PROJECT, THE FACT FINDING AND PROBLEM DEFINITION PHASE, I.E. THE NATURE OF THE PROBLEM OF INTER-COMMUNICATION IN THE FUTURE HEALTH NETWORKS.

69040009 WEGSTEIN, J. H., A SEMI-AUTOMATED SINGLE FINGERPRINT IDENTIFICATION SYSTEM, DIV. 600, APR 69, TN-481, 21P

A SYSTEM IS DESCRIBED IN WHICH A FINGERPRINT IS MANUALLY CODED BY TRACING CERTAIN RIDGES AND NOTING EVENTS SUCH AS RIDGE ENDINGS AND RIDGE BEGINNINGS. THIS CODE IS SENT BY TELEPRINTER TO A CENTRAL FILE WHERE A COMPUTER IDENTIFIES THE FINGERPRINT BY COMPARING THE CODE WITH CODES PREVIOUSLY ENTERED IN THE FILE. THE SCHEME FOR COMPARING CODES IS GIVEN ALONG WITH SOME PRELIMINARY TEST RESULTS USING TYPICAL FINGERPINTS.

69050001 LITTLE, JOHN L., SOME EVOLVING CONVENTIONS AND STANDARDS FOR CHARACTER INFORMATION CODED IN SIX, SEVEN, AND EIGHT BITS, DIV. 650, MAY 69, TN-478, 27P

THIS TECHNICAL NOTE DESCRIBES SOME OF THE PROPERTIES OF THE USA STANDARD CODE FOR INFORMATION INTERCHANGE, WIDELY KNOWN AS ASCII OR USASCII. IT ALSO RELATES THIS CODE TO SIMILAR INTERNATIONAL CODES AND PRESENTS THE NATIONAL CODE FOR RUSSIA AS AN EXAMPLE OF THE WORLDWIDE ACCEPTANCE OF THIS CODE, WHICH IS COMPRISED OF SEVEN INFORMATION BITS REPRESENTING 128 CODED CHARACTERS. SOME OF THE CONVENTIONS WHICH ARE EVOLVING TO RELATE THESE SEVEN BIT CODES TO SIX AND EIGHT BIT COMPUTER CODES ARE GIVEN, AND CONVENTIONS FOR EXTENDING THE CODE TO REPRESENT AN UNLIMITED REPERTOIRE OF CONCEPTS IS ALSO GIVEN. TWO ALTERNATE ARRANGEMENTS OF THE CODE TABLE ARE SHOWN TO FACILITATE AN UNDERSTANDING OF ITS STRUCTURE AND APPLICATION.

69060001 HUDSON, JEROME A., FRANK H. ULMER, THOMAS N. PYKE, JR., AN EXPERIMENT FOR THE STUDY OF SYSTEM DESIGN AND INSTRUMENTATION FOR REMOTE COMPUTER GRAPHICS UTILIZING A GRAPHICAL TEXT EDITOR, DIV. 650, JUN 69, NBSR 10 143, 17P, 6 REFS

THE DESIGN AND USE OF GRAPHICAL DISPLAYS LOCATED REMOTE FROM A CENTRAL COMPUTER SYSTEM AND CONNECTED WITH LIMITED COMMUNICATION LINES IS STUDIED. THIS REPORT DESCRIBES THE PLANNED DEVELOPMENT OF A PARTICULAR DISPLAY APPLICATION ON EXPERIMENTAL EQUIPMENT, EMPLOYING APPROPRIATE TECHNIQUES FOR INSTRUMENTING THE PERFORMANCE OF THE SYSTEM. THE DESCRIPTION OF THE PLANNED APPLICATION CONTAINED IN THIS REPORT INCLUDES A SUMMARY OF EXTERNAL CAPABILITIES AS WELL AS COMMENTARY ON THE INTERNAL DATA STRUCTURES AND IMPLEMENTATION.

69090001 ABRAMS, MARSHALL D., DATA STRUCTURES FOR COMPUTER GRAPHICS, DIV. 650, SEP 69, NBSR 10 144, 26P, 25 REFS

CDMPUTER GRAPHICS IS THE GENERAL TERM APPLIED TD THE USE DF A DIGITAL COMPUTER TD FDRM AN INTERNAL MDDEL REPRESENTATIDN OF AN EXTERNALLY PERCEIVED GRAPHICAL ENTITY. THE DBJECTIVE OF SUCH MDDELING IS TO EXTRACT INFDRMATIDN FROM THE GRAPHICAL ENTITY SO THAT IT MAY BE MDDIFIED, MANIPULATED. DR OTHERWISE PRDCESSED. AFTER GRAPHICAL INFDRMATIDN HAS BEEN DIGITIZED, AN ORGANIZATIDN MUST BE PRDVIDED FDR THE STORAGE AND RETRIEVAL OF THIS DATA WITHIN THE MEMORY DF THE CDMPUTER SYSTEM.

THIS REPORT CDNTAINS A DISCUSSIDN OF THDSE ORGANIZATIDNS WHICH REPRESENT THE RELATIDNSHIPS AMDNG THE COMPONENTS OF THE GRAPHICAL ENTITY. THE RELATIDNSHIPS WHICH MUST BE REPRESENTED WITHIN THIS SUBSET OF COMPUTER GRAPHICS INCLUDE TDPOLDGY AND DEPENDENCY RELATIONSHIPS. IT IS MOST CONVENIENT TD REPRESENT SUCH INFORMATION IN A HIREARCHIAL DATA STRUCTURE WHICH. IN SDME ABSTRACT WAY, MODELS THE EXTERNAL GRAPHICAL ENTITY.

6910000I BULLIS, W. MURRAY, W. R. THURBER, THOMAS N. PYKE. JR.. FRANK H. ULMER. A. L. KDENIG, USE DF A TIME-SHARED COMPUTER SYSTEM TD CONTROL A HALL EFFECT EXPERIMENT. DIV. 650. DCT 69, TN-510, 41P

AN EXPERIMENTAL TIME-SHARED COMPUTER SYSTEM HAS BEEN USED TD CONTROL AND CDLLECT DATA FRDM A HALL EFFECT EXPERIMENT. IN ADDITIDN TO SELECTION DF THE VOLTAGE SEQUENCE AND CONTRDL DF SPECIMEN CURRENT AND MAGNETIC FLUX DIRECTIONS, THE CDMPUTER EXERTS PDSITIVE CDNTROL OVER THE SPECIMEN TEMPERATURE IN ACCORDANCE WITH A SERIES OF THERMOCDUPLE VOLTAGES ENTERED BY THE OPERATDR AT THE BEGINNING DF THE RUN. THE INTERFACE CIRCUITRY IS CDNSTRUCTED FRDM FOUR GENERAL PURPDSE MODULES AND A SINGLE SPECIAL PURPOSE UNIT. DETAILS OF THE INTERFACE SYSTEM AND THE PRDGRAMS USED TO CONTRDL THE EXPERIMENT AND TO PERFORM INTERMEDIATE CALCULATIONS ARE GIVEN. IT WAS FDUND THAT THE TIME-SHARED SYSTEM WAS WELL-SUITED TD CONTROL AN EXPERIMENT OF THIS TYPE. THE DEMANDS DN THE COMPUTER WERE ESSENTIALLY SIMILAR TO THOSE REQUIRED BY A HUMAN USER INTERACTING IN A CONVERSATIONAL MODE. SUBSTANTIAL SAVINGS IN TIME OVER MANUAL DATA COLLECTIDN AND REDUCTION WERE REALIZED; A TEMPERATURE RUN WITH 38 TO 40 DATA PDINTS BETWEEN 10 AND 320 K CDULD BE COMPLETED IN LESS THAN 4 HDURS.

6910310I ELBOURN, R. D.. JUDITH F. GILSINN, SIMULATIDN DF AIR TRAFFIC CDNTRDL RADAR BEACDN CDDE ASSIGNMENT PLANS. FINAL REPDRT DN PHASE I, DIV. 650, 31 OCT 69, NBSR 10 117, 68P

AT THE REQUEST DF THE FEDERAL AVIATIDN ADMINISTRATION. NBS TESTED AND CDMPARED CDDE ASSIGNMENTS PLANS FDR THE AIR TRAFFIC CONTRDL RADAR BEACDN SYSTEM BY SIMULATING THEIR OPERATIDN DN A DIGITAL CDMPUTER. THE FIRST PHASE DF THE PROJECT WAS LIMITED TO THE CENTER ASSIGNMENT PLAN AND EMPLDYED A HIGHLY SIMPLIFIED PATTERN DF AIR TRAFFIC FLDW. A PEAK DAY'S IFR TRAFFIC. 25,646 FLIGHTS. IN THE USA WAS SIMULATED WITH THE 21 AIR ROUTE TRAFFIC CDNTRDL CENTERS ISSUING CDDES INDEPENDENTLY ACCORDING TO THREE RULES. THIS REPDRT DESCRIBES THE RESULTS OF THE FIRST PHASE.

6911DDDI GELLER, SIDNEY B.. PAUL A. MANTEK. NDRMAN G. CLEVELAND, STANDARD REFERENCE MATERIALS: CALIBRATION DF NBS SECDNDARY STANDARD MAGNETIC TAPE (COMPUTER AMPLITUDE REFERENCE) USING THE REFERENCE TAPE AMPLITUDE MEASUREMENT 'PRDCESS A', DIV. 650, NDV 69, NBS-SP-260-18, 41P

THIS PUBLICATIDN DESCRIBES THE DESIGN AND OPERATION DF THE NBS SIGNAL AMPLITUDE MEASURING SYSTEM (PRDCESS A) THAT IS USED FDR CALIBRATING UNRECDRDED SECDNDARY STANDARD MAGNETIC TAPES (COMPUTER AMPLITUDE REFERENCE). THE SIGNAL LEVEL CALIBRATION IS MADE WITH RESPECT TO A REFERENCE SIGNAL LEVEL DERIVED FRDM THE NBS MASTER STANDARD MAGNETIC TAPE (CDMPUTER AMPLITUDE REFERENCE) THAT IS KEPT IN A REPOSITORY AT NBS. THE TECHNIQUES FDR MEASURING AND RECDRDING THE DATA THAT ACCDMPANY EACH SECONDARY STANDARD MAGNETIC TAPE IN THE FDRM DF STRIP CHART RECORDINGS AND SATURATIDN CURVES ARE DESCRIBED.

6911010I GRUBB, DANA S.. LDUIS J. PALDMBD, KH SUBSYSTEM DPERATING AND MAINTENANCE INSTRUCTIDNS, DIV. 650, 1 NDV 69, NBSR 10 125, 129P

THE PURPDSE OF THE KH SUBSYSTEM IS TD PRDVIDE ACCURATE AND VALIDATED DIGITAL DATA FRDM EACH DF THE FIVE TYPE III H SYSTEM ANALDG CHANNELS TO THE K SYSTEM DIGITAL COMPUTER FDR PRDCESSING. THIS REPDRT GIVES A DESCRIPTIDN DF THE SUBSYSTEM. PRINCIPLES OF OPERATIDN, OPERATING PROCEDURES. DIRECTIDNS FDR INSTALLATION. CALIBRATION PROCEDURES AND MAINTENANCE PROCEDURES.

69120001 STROM, S. C., ARTHUR M. HOBBS. VALUATION OF TELECOMMUNICATIONS, DIV. 640, DEC 69, NBSR 9977, 66P

A PROJECT WAS ESTABLISHED TO DEVELOP EFFECTIVE METHODS FOR CALCULATING THE ATTACK WORTH OF VARIOUS ELEMENTS OF TELECOMMUNICATIONS AND TO DEVELOP OPTIMAL OFFENSIVE AND DEFENSIVE STRATEGIES FOR DESTRUCTION AND/OR PRESERVATION OF COMMUNICATION CAPABILITIES. THIS REPORT GIVES THE PROGRESS OF THE PROJECT DURING FY 1968. DURING THIS YEAR RESEARCH AND DEVELOPMENT WAS CONCENTRATED IN THE FOLLOWING TWO AREAS, 1) DETERMINATION OF IMPORTANCE NUMBERS FOR THE ELEMENTS OF A COMMUNICATIONS NETWORK AND 2) DEVELOPMENT OF OFFENSIVE AND DEFENSIVE STRATEGIES FOR A TELECOMMUNICATIONS NETWORK SERVING A MULTI-COMMAND MULTI-SUBORDINATE STRUCTURE.

69120002 STEIN, PHILIP G., LLLAMA: A LOW LEVEL LANGUAGE FOR ASSISTANCE IN MEASUREMENT AUTOMATION, DIV. 650, DEC 69, NBSR 10 147, 26P

THE REVOLUTION IN SMALL COMPUTERS HAS MADE POSSIBLE FOR THE FIRST TIME THE INCLUSION OF DATA PROCESSORS IN THE INSTRUMENTATION OF SCIENTIFIC EXPERIMENTS. THESE MACHINES CONTROL THE LABORATORY EQUIPMENT AND ANALYZE THE DATA PRODUCED. THEY OPERATE IN REAL TIME AND THEY ARE ON-LINE (DATA IS TRANSMITTED DIRECTLY IN FROM SENSORS AND DIRECTLY OUT TO EFFECTORS.) IN MOST CASES. THESE MACHINES ARE PROGRAMMED BY THE SCIENTISTS, AND ARE PROGRAMMED IN THE ASSEMBLY LANGUAGE OF THE COMPUTER IN QUESTION. IN ORDER TO ASSIST THE PROGRAMMER IN HANDLING SOME OF THE MORE INTRICATE TASKS INVOLVED IN ON-LINE CONTROL, TO MAKE IT MORE CONVENIENT TO PROGRAM SUCH A MACHINE, AND TO CREATE A NEARLY UNIVERSAL, MACHINE INDEPENDENT LABORATORY PROCESSING LANGUAGE, LLLAMA WAS DEVELOPED.

69120003 TRUITT, WILLIAM B., AUXILIARY DATA READOUT SYSTEM, DIV. 650, DEC 69, NBSR 10 187, 117P

THE DIGITAL SYSTEM FOR AN AUXILIARY DATA READOUT MUST PROCESS THE VIDEO SIGNALS FROM TWO DETECTORS SIMULTANEOUSLY. CONSEQUENTLY, IT MUST BE CAPABLE OF CONVERTING AND STORING OVER 200 BINARY WORDS IN A PERIOD OF ONE MILLISECOND. THIS REQUIRES HIGH-SPEED ANALOG-TO-DIGITAL CONVERSION, A SIZEABLE AND HIGH-SPEED MEMORY, AND A HIGH-SPEED PROCESSOR TO CONTROL THE TRANSFER OF DATA INTO AND OUT OF MEMORY. SUCH A SYSTEM, BUILT AROUND A GENERAL-PURPOSE DATA PROCESSOR, IS DESCRIBED IN THIS REPORT.

70012301 KNIGHT, GEOFFREY, JR., PROGRESS REPORT ON THE DEVELOPMENT OF A CLASSIFICATION SCHEME FOR COMPUTER PROGRAMS AND RELATED DOCUMENTATION, DIV. 660, 23 JAN 70, 97P

THIS REPORT WAS PREPARED FOR PRESENTATION TO A JOINT MEETING OF THE AMERICAN PATENT LAW ASSOCIATION'S SUBCOMMITTEE ON CLASSIFICATION OF COMPUTER PROGRAMS AND THE U.S. PATENT OFFICE'S AD HOC COMMITTEE TO ESTABLISH A SEARCH SYSTEM AND DATA BASE FOR COMPUTER PROGRAM EXAMINATION. THE WORK WAS SPONSORED BY THE OFFICE OF COMPUTER INFORMATION, CENTER FOR COMPUTER SCIENCES AND TECHNOLOGY, NATIONAL BUREAU OF STANDARDS, AND WAS CARRIED OUT IN COLLABORATION WITH MEMBERS OF THE U.S. PATENT OFFICE.

70020001 RANKIN, KIRK, JAMES L. TAN, COMPONENT COMBINATION AND FRAME-EMBEDDING IN CHINESE CHARACTER GRAMMARS, DIV. 640, FEB 70, TN-492, 34P

CHINESE CHARACTERS CAN BE ALMOST COMPLETELY DESCRIBED FROM THE POINT OF VIEW THAT EACH CHARACTER IS COMPOSED OF A NUMBER OF COMPONENTS AND THAT EACH COMPONENT IS COMPOSED OF A NUMBER OF STROKES. THIS NOTE OFFERS A GRAMMATICAL TREATMENT OF COMPONENT COMBINATION. IT IS CONCERNED WITH THE THREE MOST PRODUCTIVE PROCESSES OF COMPONENT ARRANGEMENT. THIS GRAMMAR DIFFERS FROM PREVIOUS GRAMMARS IN THAT THE CONSTRAINTS ON RECURSION HAVE BEEN MINIMIZED AND GREAT LEXICAL ECONOMY HAS BEEN ACHIEVED.

70020002 STROHLEIN, JAMES N., THOMAS C. BAGG, A SELECTIVE ROLL-TO-ROLL PRINTER FOR PRODUCING DUPLICATE MICROFILM COPIES, DIV. 50, FEB 70, TN-516, 8P

THE 'SELECTAFRAME' PRINTER, A CONVENIENT DEVICE FOR COPYING ONTO ROLL FILM SELECTED FRAMES FROM OTHER ROLLS OF FILM FOR SUBSEQUENT AUTOMATIC ENLARGEMENT PRINTING IS DESCRIBED IN DETAIL.

70030001 STEVENS, MARY ELIZABETH, RESEARCH AND DEVELOPMENT IN THE COMPUTER AND INFORMATION SCIENCES. VOLUME 1. INFORMATION ACQUISITION, SENSING, AND INPUT: A SELECTIVE LITERATURE REVIEW, DIV. 600, MAR 70, MONO-113-1, 165P, 640 REFS

THIS REPORT, THE FIRST OF A PROJECTED SERIES OF RESEARCH AND DEVELOPMENT EFFORTS AND REQUIREMENTS IN THE COMPUTER AND INFORMATION SCIENCES, IS CONCERNED WITH A SELECTIVE LITERATURE REVIEW INVOLVING THE OPERATIONS OF INFORMATION ACQUISITION, SENSING, AND INPUT TO INFORMATION PROCESSING SYSTEMS CONSIDERED IN GENERALIZED TERMS. SPECIFIC TOPICS INCLUDE BUT ARE NOT LIMITED TO: SOURCE DATA AUTOMATION AND REMOTE SENSING TECHNIQUES, COMMUNICATION SYSTEMS AND DATA TRANSMISSION LINKS, AUDIO AND GRAPHIC INPUTS, PREPROCESSING OPERATIONS UPON INPUT ITEMS SUCH AS IMAGE ENHANCEMENT AND PROPERTY FILTERING, CHARACTER RECOGNITION, SPEECH RECOGNITION, AND VARIOUS OTHER ASPECTS OF AUTOMATIC PATTERN RECOGNITION. SUPPLEMENTAL NOTES AND A BIBLIOGRAPHY OF OVER 640 CITED REFERENCES ARE INCLUDED.

70050001 STEVENS, MARY ELIZABETH, STANDARDIZATION, COMPATIBILITY AND/OR CONVERTIBILITY REQUIREMENTS IN NETWORK PLANNING, DIV. 00, MAY 70, NBSR 10 252, 395P, 469 REFS

THIS REPORT CONSIDERS THE STANDARDIZATION, COMPATIBILITY, AND/OR CONVERTIBILITY REQUIREMENTS INVOLVED IN NETWORK PLANNING, ESPECIALLY FOR THE PROPOSED BIOMEDICAL COMMUNICATIONS NETWORK, AND WITH PARTICULAR EMPHASIS UPON THE COOPERATIVE INTERCHANGE OF BIBLIOGRAPHIC INFORMATION. CURRENT FEDERAL, NATIONAL, INTERNATIONAL, AND OTHER STANDARDS RELEVANT TO BCN OPERATIONS ARE DESCRIBED. AREAS OF APPLICABILITY OF PRESENT AND PROPOSED STANDARDIZATION OR COMPATIBILITY CONCERN ARE DISCUSSED, INCLUDING THE COMMUNICATION SYSTEMS, PHYSICAL MEDIA, PROGRAMMING LANGUAGE AND DATA FORMATS, DESCRIPTIVE AND SUBJECT CATALOGING, OUTPUT AND DISPLAY, BUFFERING, AND PROTECTION REQUIREMENTS. INFORMATION CONTROL, MANAGEMENT CONTROL, AND CONTINUING COORDINATION REQUIREMENTS ARE ALSO CONSIDERED.

70050002 STEVENS, MARY ELIZABETH, RESEARCH AND DEVELOPMENT IN THE COMPUTER AND INFORMATION SCIENCES. VOLUME 2. PROCESSING, STORAGE, AND OUTPUT REQUIREMENTS IN INFORMATION PROCESSING SYSTEMS: A SELECTIVE LITERATURE REVIEW, DIV. 600, MAY 70, MONO-113-2, 125P, 480 REFS

AREAS OF CONCERN WITH RESPECT TO PROCESSING, STORAGE, AND OUTPUT REQUIREMENTS OF A GENERALIZED INFORMATION PROCESSING SYSTEM ARE CONSIDERED. SPECIAL EMPHASIS IS PLACED ON MULTIPLE-ACCESS SYSTEMS. PROBLEMS OF SYSTEM MANAGEMENT AND CONTROL ARE DISCUSSED, INCLUDING HIERARCHIES OF STORAGE LEVELS. FACSIMILE, DIGITAL, AND MASS RANDOM ACCESS STORAGE MEDIA AND TECHNIQUES ARE CONSIDERED. A VARIETY OF OUTPUT MODE REQUIREMENTS ARE ALSO CONSIDERED, INCLUDING DIRECT RECORDING TO MICROFORMS; ON-LINE DISPLAY SYSTEMS; PRINTING, PHOTOCOMPOSITION, AND AUTOMATIC CHARACTER GENERATION; AND THREE-DIMENSIONAL, COLOR, AND OTHER SPECIAL-PURPOSE DISPLAY SYSTEMS. PROBLEMS OF SYSTEM USE AND EVALUATION ARE ALSO BRIEFLY NOTED. A BIBLIOGRAPHY OF APPROXIMATELY 480 CITED REFERENCES IS INCLUDED, TOGETHER WITH SUPPLEMENTARY NOTES AND QUOTATIONS FROM THE LITERATURE.

70052201 MOORE, R. T., K SYSTEM BASELINE CONFIGURATION, DIV. 650, 22 MAY 70, NBSR 10 243, 91P

THIS REPORT DESCRIBES THE EQUIPMENT AND FACILITIES WHICH HAVE BEEN INTEGRATED AS THE K-SYSTEM BASE-LINE CONFIGURATION. IT IS INTENDED TO PROVIDE A GENERAL OVERVIEW OF THE K SYSTEM AND TO DESCRIBE ITS PERFORMANCE CAPABILITIES IN FUNCTIONAL TERMS WHICH WILL CONVEY AN UNDERSTANDING OF WHAT THESE ARE RATHER THAN A DETAILED ACCOUNTING OF HOW THEY ARE ATTAINED.

70060001 STEVENS, MARY ELIZABETH, RESEARCH AND DEVELOPMENT IN THE COMPUTER AND INFORMATION SCIENCES. VOLUME 3. OVERALL SYSTEM DESIGN CONSIDERATIONS: A SELECTIVE LITERATURE REVIEW, DIV. 600, JUN 70, MONO-113-3, 147P, 570 REFS

THIS REPORT, THE THIRD IN A SERIES ON RESEARCH AND DEVELOPMENT EFFORTS AND REQUIREMENTS IN THE COMPUTER AND INFORMATION SCIENCES, IS CONCERNED WITH A SELECTIVE LITERATURE REVIEW INVOLVING OVERALL SYSTEM DESIGN CONSIDERATIONS IN THE PLANNING OF INFORMATION PROCESSING SYSTEMS AND NETWORKS. SPECIFIC TOPICS INCLUDE BUT ARE NOT LIMITED TO: REQUIREMENTS AND RESOURCES

ANALYSIS. PROBLEMS OF SYSTEM NETWORKING. INPUT/OUTPUT AND REMOTE TERMINAL DESIGN. CHARACTER SETS. PROGRAMMING PROBLEMS AND LANGUAGES. PROCESSOR DESIGN CONSIDERATIONS. ADVANCED HARDWARE DEVELOPMENTS. DEBUGGING AND ON-LINE DIAGNOSIS OR INSTRUMENTATION. AND PROBLEMS OF SIMULATION. SUPPLEMENTAL NOTES AND A BIBLIOGRAPHY OF OVER 570 CITED REFERENCES ARE INCLUDED.

70070001 ABRAMS, MARSHALL D., HIDETOSHI KAWAI, THOMAS N. PYKE, JR., PERFORMANCE MEASUREMENT OF REMOTE ACCESS COMPUTER SYSTEMS, DIV. 650, JUL 70, NBSR 10 381, 39P, 45 REFS

EARLY EMPHASIS ON PERFORMANCE MEASUREMENT OF REMOTE ACCESS COMPUTER SYSTEMS HAS BEEN ORIENTED TOWARD MEASUREMENT OF PARAMETERS INTERNAL TO THE SYSTEMS. THE EFFORTS TO MEASURE THE INTERNAL PERFORMANCE OF REMOTE ACCESS SYSTEMS HAVE BEEN AUGMENTED BY RELATED EFFORTS TO MEASURE THE EXTERNAL PERFORMANCE, OR THAT OBSERVED BY A USER AT A REMOTE ACCESS TERMINAL. IN THIS REPORT, A SUMMARY OF REPORTED TECHNIQUES THAT HAVE BEEN APPLIED TO REMOTE ACCESS COMPUTER SYSTEMS IS PRESENTED. IN ADDITION, EXTENSION OF THESE TECHNIQUES AND SOME NEW ONES ARE DISCUSSED. A PROGRAM CONCERNED WITH AUTOMATED MEASUREMENT OF THE PERFORMANCE OF REMOTE ACCESS SYSTEMS IS THEN DESCRIBED.

70072001 BOLOTSKY, GLORIA R., JERROLD W. GROSSMAN, ROY G. SALTMAN, COMPUTATIONAL RESULTS FOR A STUDY OF COMMUNICATIONS SURVIVABILITY, DIV. 640, 20 JUL 70, 640.01 - 1

THIS REPORT DOCUMENTS A STUDY EFFORT FOR THE DEFENSE COMMUNICATIONS AGENCY BY THE SYSTEMS DEVELOPMENT DIVISION OF THE NATIONAL BUREAU OF STANDARDS (NBS) UNDER REIMBURSABLE ORDER 70-19. THE STUDY EVALUATES A HYPOTHETICAL 69 SWITCH NETWORK WITH TWO CONFIGURATIONS: POLYGRID AND ROUTE LIMITED. THE NBS PATHFINDER-WORTH PROGRAM AND THE DEFENDER'S ALGORITHM WERE APPLIED TO THESE TWO NETWORK CONFIGURATIONS TO DETERMINE RELATIVE IMPORTANCE OF THE 69 SWITCHES FROM A SURVIVABILITY VIEWPOINT.

70080001 WEGSTEIN, J. H., AUTOMATED FINGERPRINT IDENTIFICATION, DIV. 600, AUG 70, TN-538, 31P

A PROCEDURE IS DESCRIBED FOR DETERMINING WHETHER TWO FINGERPRINT IMPRESSIONS WERE MADE BY THE SAME FINGER. THE PROCEDURE USES THE X AND Y COORDINATES AND THE INDIVIDUAL DIRECTIONS OF THE MINUTIAE (RIDGE ENDINGS AND BIFURCATIONS). THE IDENTITY OF TWO IMPRESSIONS IS ESTABLISHED BY COMPUTING THE DENSITY OF CLUSTERS OF POINTS IN DELTA X - DELTA Y SPACE WHERE DELTA X AND DELTA Y ARE THE DIFFERENCES IN COORDINATES THAT ARE FOUND IN GOING FROM ONE OF THE FINGERPRINT IMPRESSIONS TO THE OTHER. EXPERIMENTAL RESULTS USING MACHINE-READ MINUTIAE DATA ARE GIVEN ALONG WITH RESULTS FROM A PREVIOUSLY REPORTED PROCEDURE THAT UTILIZED CONSTELLATIONS OF MINUTIAE IN ITS MATCHING PROCESS.

70090001 GRAY, K. M., THE KUI SUBSYSTEM, DIV. 650, SEP 70, NBSR 10 501, 70P

THE PURPOSE OF THE KUI SUBSYSTEM IS TO PROMOTE DATA, ON-LINE AND IN REAL-TIME, TO THE K-SYSTEM COMPUTER FOR MONITORING AND PROCESSING. THIS REPORT GIVES AN INTRODUCTION TO THE KUI SUBSYSTEM, PRINCIPLES OF OPERATION, RECEIVER MODIFICATIONS, THE CALIBRATION PROCEDURE AND INSTALLATION CHECKOUT AND THE MAINTENANCE SCHEDULE.

70090002 STEVENS, MARY ELIZABETH, PROBLEMS OF NETWORK ACCOUNTING, MONITORING AND PERFORMANCE MEASUREMENT, DIV. 600, SEP 70, NBSR 10 559, 136P, 162 REFS

THIS REPORT CONSIDERS THE PROBLEMS OF ACCOUNTING, MONITORING, PERFORMANCE MEASUREMENT, AND PERFORMANCE EVALUATION INVOLVED IN NETWORK PLANNING, ESPECIALLY FOR THE PROPOSED BIOMEDICAL COMMUNICATIONS NETWORK. QUESTIONS OF AUTHENTICATION OF AUTHORIZED USE; AUDIT TRAILS; CHARGING, PRICING, BILLING, AND CREDITING, AND COST-BENEFIT ANALYSES ARE CONSIDERED. NETWORK PERFORMANCE MONITORING OPERATIONS INVOLVING ON-LINE INSTRUMENTATION, SELF-DIAGNOSIS, AND USER REACTIONS ARE DISCUSSED. PERFORMANCE MEASUREMENT AND EVALUATION CONSIDERATIONS INCLUDE HUMAN FACTORS, RECONFIGURATION REQUIREMENTS, AND DESIRABLE IMPROVEMENTS IN MEASURES OF PERFORMANCE EFFECTIVENESS. IT IS CONCLUDED THAT CURRENT EVALUATION METHODOLOGY IS INADEQUATE, ESPECIALLY FOR HETEROGENEOUS TELEPROCESSING NETWORKS AND THEREFORE THAT FURTHER EXPLORATION AND EXPERIMENTATION WILL BE REQUIRED.

70093001 STROHLEIN, JAMES N., LOUIS J. PALOMBO, REMOTE GAMMA SOURCE HANDLING SYSTEM, OIV. 650, 30 SEP 70, NBSR 10 352, 60P

NBS WAS REQUESTED TO DESIGN, FABRICATE AND INSTALL THE EQUIPMENT AND CONTROL SYSTEM FOR REMOTE HANDLING OF CO-60 GAMMA RAY SOURCE FOR THE ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE (AFRRI). THE EQUIPMENT CONSISTS OF TWO MOBILE SOURCE ELEVATORS, REMOTE CONTROL SYSTEM CONSOLE, SAFETY INTERLOCK SYSTEM, RADIATION MONITORING SYSTEMS, SOURCE ELEMENT STORAGE RACKS AND MANUAL HANDLING TOOLS. THIS REPORT DESCRIBES THE PORTION OF THE AFRRI CO-60 IRRADIATOR PROVIDED BY NBS AND INCLUDES OPERATING AND MAINTENANCE INSTRUCTIONS.

70120001 FRIEDMAN, D. C., K SYSTEM BASELINE SOFTWARE. VOLUME I, DIV. 650, DEC 70, NBSR 10 524 VOL. 1, 204P

THE INFORMATION ON THE K SYSTEM BASELINE SOFTWARE IS ISSUED IN TWO REPORTS. THIS REPORT, VOLUME I, CONTAINS INFORMATION REGARDING THE REQUIREMENTS TO BE MET BY K SYSTEM PROGRAMS AT BASELINE, FLOWCHARTS OF THE PROGRAMS DEVELOPED TO MEET THESE REQUIREMENTS AND THE DESCRIPTIONS OF THE COMPUTATIONAL METHODS USED IN IMPLEMENTING THE FLOWCHARTS. THIS VOLUME SHOULD PROVIDE SUFFICIENT INFORMATION FOR USERS WHO WISH TO LEARN FUNCTIONAL REQUIREMENTS OF THE K PROGRAMS AND HOW THESE ARE MET.

70120002 FRIEDMAN, D. C., K SYSTEM BASELINE SOFTWARE. VOLUME II, DIV. 650, DEC 70, NBSR 10 524 VOL. 2, 477P

THE INFORMATION ON THE K SYSTEM BASELINE SOFTWARE IS ISSUED IN TWO REPORTS. THIS REPORT, VOLUME II, CONSISTS OF APPENDICES TO VOLUME I, INCLUDING DETAILS OF THE PROGRAMS WITH PROGRAM LISTINGS AND SOME DETAILS OF THE OPERATION OF THE COMPUTER SYSTEM WHICH AFFECT PROGRAMMING.

THIS REPORT CONTAINS DETAILS OF PROGRAMMING AND K SYSTEM HARDWARE OF INTEREST ONLY TO THOSE WHO INTEND TO MODIFY THESE PROGRAMS OR SYSTEM HARDWARE AFFECTING THEM, TO INCORPORATE INTO THE SYSTEM ADDITIONAL PROGRAMS, OR TO TRANSFER THESE PROGRAMS TO OTHER HARDWARE.

71010001 BOLOTSKY, GLORIA R., ZELLA G. RUTHBERG, ROY G. SALTMAN, USER'S MANUAL FOR THE ONC MAP PLOTTING PROGRAM SIPLOT, DIV. 640, JAN 71, NBSR 10 545, 71P, 3 REFS

THE PURPOSE OF THE SIPLOT PROGRAM IS TO PLOT A SET OF GEOGRAPHICAL POINTS ON A SET OF OVERLAYS FOR A GROUP OF THE OPERATIONAL NAVIGATIONAL CHARTS (ONC MAPS) OF THE WORLD. THE SET OF POINTS ARE ARBITRARY IN LOCATION AND NUMBER AND ARE SPECIFIED BY THE USER. OPTIONS FOR ANY PLOTTED POINT ARE: 1) HAVING A SYMBOL PLACED ABOVE THE POINT, 2) DRAWING ONE TO THREE CONCENTRIC CIRCLES ABOUT THE POINT AND 3) CHOOSING ONE OF FOUR COLORS FOR THE INFORMATION RELATING TO A POINT. SECURITY CLASSIFICATION FOR EACH COMPUTER RUN CAN ALSO BE SELECTED.

71012501 GRAY, K. M., R. T. MOORE, THE K-SYSTEM MONITOR CONSOLE, DIV. 650, 25 JAN 71, NBSR 10 552, 59P

THE K-SYSTEM MONITOR IS A CONSOLE FOR DISPLAYING THE STATUS OF THE VARIOUS COMPONENT PORTIONS OF THE K-SYSTEM AND FOR ALERTING OPERATING PERSONNEL TO THE OCCURRENCE OF MALFUNCTIONS. IN ADDITION, THE OCCURRENCE OF THREE SUBSYSTEM ALERTS MAY BE DISPLAYED UNDER COMPUTER CONTROL. THIS REPORT DESCRIBES THE K-SYSTEM MONITOR CONSOLE, DISCUSSES ITS OPERATION, HARDWARE CONFIGURATION AND MAINTENANCE.

71030001 ELBOURN, R. D., JUDITH F. GILSINN, SIMULATION OF AIR TRAFFIC CONTROL RADAR BEACON CODE ASSIGNMENT PLANS, FINAL REPORT, DIV. 650, MAR 71, TN-568, 73P

IN THE AIR TRAFFIC CONTROL RADAR BEACON SYSTEM TRANSPONDERS IN THE AIRCRAFT USE ONE OF 4096 IDENTITY CODES WHEN REPLYING TO INTERROGATION FROM THE SECONDARY SURVEILLANCE RADAR. TWO TYPES OF PLANS FOR ASSIGNING IDENTITY CODES TO AIRCRAFT WERE TESTED BY SIMULATING IN A DIGITAL COMPUTER A PEAK DAY'S IFR TRAFFIC IN THE USA. IN ONE TYPE EACH AIR ROUTE TRAFFIC CONTROL CENTER ASSIGNS CODES INDEPENDENTLY OF ALL THE OTHERS, WHILE IN THE OTHER TYPE A SINGLE MASTER CENTER MAKES ALL THE CODE ASSIGNMENTS FOR THE USA. FOUR OTHER TYPES OF PLANS ARE DISCUSSED, AND AN ASSIGNMENT PLAN OF MIXED TYPE IS

PROPOSED FOR FURTHER STUDY. THE STRATEGY OF SIMULATION AND THE USE OF THE SIMSCRIPT LANGUAGE ARE DISCUSSED IN AN APPENDIX./

71032301 FRIEDMAN, D. C., SUSAN K. REED, DOCUMENTATION OF 'QSCAN', A PROGRAM FOR VERIFYING UPPER AND LOWER CASE TEXT WITH CONTROL SYMBOLS, DIV. 640, 23 MAR 71, NBSR 10 560, 16P

QSCAN IS A SIMPLIFIED PROGRAM WHICH PROVIDES TAPE OUTPUT IN UPPER AND LOWER CASE CHARACTERS FOR NORMAL RUNNING TEXT AND PROVIDES AN INDICATION OF THE CODING OF OTHER SYMBOLS AND SPECIAL CODES. THIS INTERIM PROGRAM ENABLED A CHECK TO BE MADE ON TAPES WHICH WERE BEING PRODUCED FOR THE PATENT OFFICE MORE EASILY THAN PROCESSING HEXADECIMAL DUMPS OF THE TAPE. THIS REPORT GIVES A BASIC DESCRIPTION OF THE PROGRAM INCLUDING TAPE FORMATS, FLOWCHARTS, PROGRAM LISTING AND SAMPLE PRINTOUTS.

71040001 REITWIESNER, GEORGE W., ON COMPUTER PERFORMANCE MEASUREMENT PROGRAMMING. MEASURING INDEXING ADROITNESS BY ISOLATING COMPLEX PRIMES, DIV. 600, APR 1971, TN-572, 23P

THIS WRITING DESCRIBES A TEST PROGRAM FOR A COMPUTER. IT IS CONCERNED NOT WITH SPECIFIC MEASUREMENTS TAKEN, BUT RATHER WITH A PROCEDURE FOR MAKING MEASUREMENTS REGARDING A SPECIFIC PROPERTY OF COMPUTER OPERATION. THE PROGRAM IS WRITTEN IN A PARTICULAR PROBLEM-ORIENTED PROGRAMMING LANGUAGE; THEREFORE ASSESSMENT SPANS THE EFFECTS OF THE COMPUTER HARDWARE, OF THE PROGRAMMING LANGUAGE, AND OF THE COMPILING PROCESS.
THE OBJECTIVE OF THE TEST IS TO ASSESS ADROITNESS IN CERTAIN INDEXING OPERATIONS. ASSESSMENT IS ACCOMPLISHED BY MEASURING EXECUTION TIME OF A RECURSIVE PROGRAMMING LOOP. THE TEST PROBLEM WAS CHOSEN AS A CONVENIENT ARTIFICE TO USE SPECIFIC INDEXING-TYPE OPERATIONS IN THE PROGRAMMING EMPLOYED FOR SOLUTION. THE TEST PROBLEM PERFORMS A SIMPLE COMPUTATION FOR WHICH THE SOLUTION IS COMPLETELY DEFINITIVE, YET FOR WHICH BOTH THE SOLUTION AND THE TIME FOR ACHIEVING IT ARE VARIABLE UNDER PARAMETERS WHOSE VALUES ARE INTRODUCED AS PROGRAM INPUT DATA.

71040002 OLOFIELD, MARTHA J., TAD-KUANG MING, CHEMICAL AND PHARMACOLOGICAL DATA MANAGEMENT, DIV. 640, APR 71, NBSR 10 569, 33P

THIS IS THE FINAL REPORT ON THE CHEMICAL AND PHARMACOLOGICAL INFORMATION MANAGEMENT PROJECT AND IS THE PRESENTATION TO NIH OF RECOMMENDATIONS PERTINENT TO THE DESIGN OF A NEW, MORE AMBITIOUS SYSTEM FOR SUCH INFORMATION MANAGEMENT BASED ON EXPERIENCE IN THE BUILDING AND EXERCISING A CARD-INPUT BATCH SYSTEM. THE EXISTING SYSTEM IS FIRST DESCRIBED, AND THEN ANALYZED IN TERMS OF SPECIFIC FEATURES BOTH EXISTING AND NOTABLY LACKING.

71050001 STEVENS, MARY ELIZABETH, INTERLOCKING DIRECTORIES -- PROBLEMS AND PROSPECTS OF NETWORK REFERRAL RESOURCES, DIV. 600, MAY 71, NBSR 10 473, 204P

THE IMPORTANCE OF KNOWING WHERE TO GO TO OBTAIN INFORMATION ABOUT RESOURCES IS STRESSED FOR PURPOSES OF NETWORK PLANNING. THE EXTENT TO WHICH INFORMATION-RESOURCE-INFORMATION IS NOW OR COULD BE MADE MACHINE-USEFUL IS DISCUSSED. DIRECTORIES-TO-DIRECTORIES OR INTERLOCKING DIRECTORIES, ON PEOPLE, INSTITUTIONS, CURRENT ACTIVITIES, THE LITERATURE, NON-BOOK MATERIALS, AND GOODS AND SERVICES, ARE NEEDED. APPENDICES TO THE REPORT CONSIST OF A BIBLIOGRAPHY OF CITED AND/OR PERTINENT REFERENCES AND A PROPER NAME INDEX.

71052701 REITWIESNER, GEORGE W., COUNTING EXCLUDED CASES--ELIMINATING PAIRS OF DIGITS WITH EQUAL DISTANCES FROM STRINGS WITH CHECK DIGITS, DIV. 600, 27 MAY 71, NBSR 10 639, 21P

THE ACCURACY OF TRANSCRIPTION OF A STRING OF DIGITS CAN BE POLICED FOR A SINGLE ERROR BY ADDING TO THE STRING A CHECK DIGIT WHOSE VALUE IS ESPECIALLY ASSIGNED SUCH THAT THE SUM OF SOME PERMUTATION FUNCTIONS OF EACH OF THE DIGITS (INCLUDING THE CHECK DIGIT) YIELDS A PREDETERMINED VALUE WHEN AND ONLY WHEN THE TRANSCRIPTION IS PERFORMED CORRECTLY. (SEE ALSO NBSR 10 886)

71060001 FRIEDMAN, D. C., DOCUMENTATION OF BLOK1 AND BLOK2 -- PROGRAMS FOR PRINTING OF SELECTED TAPE BLOCKS, DIV. 650, JUN 71, NBSR 10 445, 10P

BLOK1 IS A COMPUTER PROGRAM WHICH PERMITS THE PRINTING OUT OF SELECTED TAPE BLOCKS FROM A TAPE OF PATENT DATA. IT PERMITS THE ALTERNATE SKIPPING AND PRINTING OF SELECTED NUMBERS OF BLOCKS FOR AS MANY AS TEN SAMPLES FROM A REEL OF TAPE. BLOK2 IS A VERSION OF BLOK1. THIS REPORT GIVES A GENERAL DESCRIPTION AND DOCUMENTATION OF THESE TWO PROGRAMS.

71060002 PYKE, THOMAS N., JR., SIEGFRIED TREU, JEROME A. HUDSON, PERFORMANCE MEASUREMENT OF INTERACTIVE GRAPHICS SYSTEMS IN SUPPORT OF COMPUTER-AIDED DESIGN AND ENGINEERING, DIV. 650, JUN 71, NBSR 10 451, 42P, 16 REFS

THE MATERIAL PRESENTED IN THIS REPORT IS A RESULT OF WORK PERFORMED BETWEEN SEPTEMBER 15, 1970, AND JUNE 30, 1971, AS PART OF A LONG TERM 'INTERACTIVE COMPUTER-AIDED TECHNIQUES STUDY'. A GENERAL PERFORMANCE MEASUREMENT METHODOLOGY IS INTRODUCED IN WHICH A FRAMEWORK FOR ESTABLISHING MEANINGFUL PERFORMANCE CRITERIA AND SPECIFIC MEASURES IS DEVELOPED. WITHIN THE FRAMEWORK A NUMBER OF MEASURES ARE SUGGESTED AS RELEVANT TO EVALUATING INTERACTIVE GRAPHICS SYSTEMS. THE REPORT ALSO DESCRIBES AN INTERACTIVE GRAPHICAL THERMAL DESIGN SYSTEM THAT HAS BEEN IMPLEMENTED AND IS INTENDED FOR USE IN TESTING PROPOSED PERFORMANCE MEASURES AND IN COMPARING INTERACTIVE GRAPHICS WITH ALTERNATIVE MEANS FOR SUPPORTING COMPUTER-AIDED DESIGN.

71060010 GELLER, SIDNEY B., STANDARD REFERENCE MATERIALS: CALIBRATION OF NBS SECONDARY STANDARD MAGNETIC TAPE (COMPUTER AMPLITUDE REFERENCE) SRM 3200 USING THE REFERENCE TAPE AMPLITUDE MEASUREMENT 'PROCESS A' MODEL II, DIV. 650, JUN 71, NBS-SP-260-29, 57P

THIS PUBLICATION DESCRIBES THE DESIGN, OPERATION AND CALIBRATION OF THE NBS SIGNAL AMPLITUDE MEASURING SYSTEM (PROCESS A - MODEL II) THAT IS USED FOR CALIBRATING UNRECORDED SECONDARY STANDARD MAGNETIC TAPES (COMPUTER AMPLITUDE REFERENCE) SRM 3200. THIS SYSTEM SUPERCEDES THE MEASUREMENT SYSTEM THAT WAS DESCRIBED IN THE NBS SPECIAL PUBLICATION 260-18 (NOVEMBER 1969). THE SIGNAL LEVEL CALIBRATION IS MADE WITH RESPECT TO A REFERENCE SIGNAL LEVEL DERIVED FROM THE NBS MASTER STANDARD MAGNETIC TAPE (COMPUTER AMPLITUDE REFERENCE) THAT IS KEPT IN REPOSITORY AT NBS. THE TECHNIQUES FOR MEASURING AND RECORDING THE DATA THAT ACCOMPANY EACH SECONDARY STANDARD MAGNETIC TAPE IN THE FORM OF STRIP CHART RECORDINGS AND SATURATION CURVES ARE DESCRIBED.

71061501 JONES, U. T., THE K-SYSTEM CODE CHANGE DETECTOR, DIV. 650, 15 JUN 71, NBSR 10 450, 59P

THE FUNCTION OF THE CODE CHANGE DETECTOR IS TO MONITOR THE VARIOUS CONTROL POSITION ENCODERS, MAINTENANCE SWITCHES AND INE (INVALID DATA, EQUIPMENT SENSED) SIGNALS OF THE K SYSTEM AND GENERATE A PULSE SIGNAL SUBSEQUENT TO ANY CHANGE IN THE ENCODED DATA, MAINTENANCE MODES, OR INE STATES. THIS REPORT DESCRIBES THE PRINCIPAL HARDWARE AND CIRCUIT THEORY OF THE K-SYSTEM CODE CHANGE DETECTOR. THE DESCRIPTION ENCOMPASSES THE CODE CHANGE DETECTOR CHASSIS, THE DETECTOR INPUT RESISTORS AND THE DETECTOR INPUT TERMINALS.

71070001 FONG, ELIZABETH, A PRELIMINARY DESIGN OF A DATA RETRIEVAL LANGUAGE TO HANDLE A GENERALIZED DATA BASE: DRL, DIV. 640, JUL 71, TN-590, 26P

DRL (DATA RETRIEVAL LANGUAGE) IS A HIGH-LEVEL PROGRAMMING LANGUAGE FOR INFORMATION RETRIEVAL. THE LANGUAGE INCLUDES A DATA DESCRIPTION LANGUAGE WHICH CAN DESCRIBE FIXED-LENGTH HIERARCHICAL DATA STRUCTURES, AND DRL INCLUDES A DATA RETRIEVAL STATEMENT WHEREBY A USER CAN RETRIEVE DATA BY SPECIFYING CONDITIONS ON TO THE DATA VALUE. DRL ALSO HAS AN ENVIRONMENT DECLARATION STATEMENT IN WHICH THE USER CAN INDICATE SPECIFIC PERIPHERAL DEVICES BY UNIT NUMBER FOR FILES. THE REST OF THE LANGUAGE CONSISTS OF AN OPERATION REPERTORY OF INPUT-OUTPUT FUNCTIONS AND OTHER DATA MANIPULATIONS. DRL IS IMPLEMENTED AS A PREPROCESSOR TO FORTRAN V ON THE UNIVAC 1108. KEYWORDS ACT AS TRIGGERS AND ARE REPLACED BY BLOCKS OF FORTRAN CODE.

THE PURPOSE OF THIS PROJECT IS TO INVESTIGATE THE DESIGN OF AN INFORMATION RETRIEVAL LANGUAGE TO HANDLE A GENERALIZED DATA BASE. THE DRL SYSTEM CONSISTS OF A SET OF PRIMITIVES UTILIZING BOTH COMPILE-TIME MACROS AND RUN-TIME SUBROUTINES. THESE PRIMITIVES ARE EMBEDDED IN A HIGH LEVEL PROCEDURE-ORIENTED PROGRAMMING LANGUAGE--THE 'HOST LANGUAGE'--FORTRAN IN THIS CASE. THESE PIMITIVES FORM A BASE UPON WHICH A CLASS OF LANGUAGES CAN BE DEFINED.

71071201 RANKIN, KIRK, THE WORD IN PATENT TEXT, DIV. 640, 12 JUL 71, NBSR 10 584, 8P

THIS REPORT IS IN TWO PARTS: ONE PRESENTS A USEFUL DEFINITION OF THE 'WORD' IN PATENT TEXT, AND THE OTHER DISCUSSES POSSIBILITIES OF DELIMITING VARIOUS SORTS OF WORD SEQUENCES IN TEXT WHICH ARE LIKELY TO BE USEFUL IN CLASSIFYING PATENT DOCUMENTS BY COMPUTER. THE EMPHASIS IS ON CHEMICAL PATENTS.

71072601 MINNICK, DANIEL J., COMPUTER PROGRAM TRANSFERABILITY: A BASIC UNDERSTANDING TOWARDS ENHANCEMENT, DIV. 640, 26 JUL 71, NBSR 10 804, 39P, 21 REFS

THE PRIMARY PURPOSE OF THIS REPORT IS TO PROVIDE A BASIC UNDERSTANDING OF THE PROBLEMS ASSOCIATED WITH COMPUTER PROGRAM TRANSFERABILITY, AND TO INDICATE POSSIBLE SOLUTIONS TO THESE PROBLEMS, OR MEANS OF PREVENTING THEM, IN ORDER TO ENHANCE THE TRANSFER OF PROGRAMS. THIS REPORT HAS BEEN DEVELOPED IN VIEW OF THE TRANSFERABILITY OBJECTIVE OF HUD/USAC'S SIX PROTOTYPE MUNICIPAL INFORMATION SYSTEMS, AND IT IS CONSIDERED TO BE A FUNDAMENTAL PRESENTATION FOR USE BY CITY PERSONNEL. A SECONDARY PURPOSE, THOUGH, IS TO PROVIDE ENOUGH GENERAL INFORMATION ABOUT THESE PROBLEMS AND SOLUTIONS TO BE OF USE TO ANY POTENTIAL PROGRAM TRANSFEROR OR TRANSFEREE.

'TRANSFERABILITY' IS A CONCEPT WHICH ENCOMPASSES THE SYSTEM/SUBSYSTEM, OR MORE DETAILED, LEVELS OF THE HUD/USAC MUNICIPAL EFFORTS. IT INVOLVES POLITICAL, INTERGOVERNMENTAL, ORGANIZATIONAL, OPERATIONAL, AND TECHNICAL PROBLEMS AND CONSIDERATIONS WHICH MUST BE IDENTIFIED, ANALYZED, AND RESOLVED BEFORE IT CAN BE OPTIMALLY ACHIEVED. THIS REPORT FOCUSES PRINCIPALLY ON THE TECHNICAL ASPECTS OF COMPUTER PROGRAM TRANSFERABILITY.

71072801 FREEMIRE, RICHARD, TAO-KUANG MING, MARTHA J, OLOFIELD, CHEMICAL AND PHARMACOLOGICAL DATA MANAGEMENT USER'S GUIDE, DIV. 640, 28 JUL 71, NBSR 10 463, 29P

THIS IS THE USER'S GUIDE FOR CHEMICAL AND BIOLOGICAL INFORMATION RETRIEVAL PROGRAM AS IT EXISTS ON FEBRUARY 1, 1971. THIS PRESUMES A PRIOR KNOWLEDGE OF WHAT THE SYSTEM CAN DO AND A FAMILARITY WITH ITS VARIOUS PARTS. A DESCRIPTION OF THE PARAMETER TABLE, PROCEDURES FOR FILE CREATION AND MAINTENANCE AND SEARCH PROCEDURES ARE INCLUDED.

71090001 BROOKS BILL ISSUE STUDY OF THE NATIONAL BUREAU OF STANDARDS, DIV. 600, SEP 71, NBSR 10 608, 233P

THE ROLE OF THE NATIONAL BUREAU OF STANDARDS IN FEDERAL AUTOMATIC DATA PROCESSING OPERATIONS WAS IDENTIFIED AS A PROGRAM ISSUE BY THE BUREAU OF THE BUDGET (NOW THE OFFICE OF MANAGEMENT AND BUDGET) IN A LETTER TO THE DEPARTMENT OF COMMERCE DATED APRIL 7, 1970. SPECIFICALLY, A STUDY OF THE FOLLOWING WAS REQUESTED: WHAT CAN BE DONE TO MAKE THE NATIONAL BUREAU OF STANDARDS MORE EFFECTIVE IN ACHIEVING GREATER EFFICIENCY AND ECONOMY IN GOVERNMENT ADP OPERATIONS, AS ENVISIONED IN THE BROOKS BILL (P.L. 89-306)?

TWO OBJECTIVES WERE ESTABLISHED FOR THIS STUDY: (1) TO IDENTIFY PROBLEMS IN GOVERNMENT AUTOMATIC DATA PROCESSING THAT AFFECT OBJECTIVES OF THE BROOKS BILL; AND RELATED TO THESE PROBLEMS IDENTIFY PRESENT PRACTICES, ALTERNATIVES TO PRESENT PRACTICES, RESOURCES REQUIRED IN AND OUT OF NBS TO IMPLEMENT THE ALTERNATIVES, BENEFITS TO BE DERIVED FROM THE ALTERNATIVES, AND RISKS OR CONSTRAINTS INVOLVED IN ALLEVIATING THE PROBLEMS; AND (2) DETERMINE WHETHER NBS OR OTHER AGENCIES NEED ADDITIONAL AUTHORITY OR POLICY GUIDANCE, AND WHAT FACT FINDING STUDIES, IF ANY, ARE NECESSSARY TO CONTRIBUTE TO THE REDUCTION OF PROBLEMS IDENTIFIED IN (1) ABOVE.

71100001 RUTHBERG, ZELLA G., GLORIA R. BOLOTSKY, PROGRAMMER'S MANUAL FOR THE ONC MAP PLOTTING PROGRAM SIPLOT, DIV. 640, OCT 71, NBSR 10 619, 59 PLUS APPENDICESP, 5 REFS

THE PURPOSE OF THE SIPLOT PROGRAM IS TO PLOT A SET OF GEOGRAPHIC POINTS ON A SET OF OVERLAYS FOR A GROUP OF THE OPERATIONAL NAVIGATIONAL CHARTS (ONC MAPS) OF THE WORLD. THE SET OF POINTS ARE ARBITRARY IN LOCATION AND NUMBER AND ARE SPECIFIED BY THE USER. OPTIONS FOR ANY PLOTTED POINT ARE GIVEN. SIPLOT WAS WRITTEN IN FORTRAN IV AND IS DESIGNED FOR USE WITH THE CALCOMP 718 PLOTTER.

71100009 FONG, ELIZABETH, A SURVEY OF SELECTED DOCUMENT PROCESSING SYSTEMS, DIV. 640, OCT 71, TN-599, 67P

THERE ARE MANY OOCUMENT PROCESSING SYSTEMS THAT ARE COMMERCIALLY AVAILABLE OR GOVERNMENT-OWNEO. THESE SYSTEMS EMERGEO IN THE EVOLUTION FROM EARLY EFFORTS IN LIBRARY AUTOMATION TO CURRENT ON-LINE SYSTEMS. OUE TO THE OIVERSE NATURE OF THE FACILITIES PROVIOED IN THE OOCUMENT PROCESSING SYSTEMS, IT IS OIFFICULT TO EVALUATE THEM. THE PURPOSE OF THIS PAPER IS TO PRESENT A LIST OF FEATURES AS A SET OF DIMENSIONS ALONG WHICH TO COMPARE THE SURVEYEO SYSTEMS. THE FEATURE LIST IS ALSO OEVELOPEO TO SERVE AS A COMMON BASIS FOR OESCRIBING OOCUMENT PROCESSING SYSTEMS. ANOTHER PURPOSE OF THIS PAPER IS TO PROVIOE A REFERENCE TOOL FOR THE EIGHT SYSTEMS SURVEYED. THEY ARE CIRCOL, OOC ITIRC, THE MEAO OATA CENTRAL, MEOLARS II, NEW YORK TIMES INFORMATION BANK, ORBIT II, AND RECON/STIM. THIS PAPER FIRST EXPLORES THE CHARACTERISTICS OF AVAILABLE, LARGE DOCUMENT PROCESSING SYSTEMS IN GENERAL. AN OVERVIEW OF THE EIGHT SYSTEMS SURVEYEO IS PRESENTEO. THE PAPER THEN OEFINES THE FEATURE LIST. THE OESCRIPTION OF THE EIGHT SYSTEMS SURVEYEO ACCOROING TO THE FEAUTRE LIST OUTLINE IS INCLUDEO AS AN APPENOIX.

71110101 MARRON, BEATRICE A. S., ROY G. SALTMAN, A NETWORK EMBEOOING PROBLEM, OIV. 640, 1 NOV 71, NBSR 10 617, 13P

WORK HAS BEEN CARRIEO OUT FOR THE OEFENSE COMMUNICATIONS AGENCY (OCA) ON A TELECOMMUNICATIONS NETWORK EMBEOOING PROBLEM. OCA OESIRES TO EMBED A SMALLER SWITCHEO MILITARY NETWORK (E.G. THE AUTOMATIC VOICE NETWORK) INTO A LARGER COMMON CARRIER GRIO AND EXPLOIT ALL USABLE REOUNOANCE FOR SURVIVABILITY PURPOSES. THE OCA WISHES TO SELECT THE CONFIGURATION OF ITS NETWORK ON SOME LOGICAL BASIS SUCH AS MINIMUM COST WITH MAXIMUM SURVIVABILITY. A METHOO OF ANALYSIS FOR THIS PROBLEM OEVELOPEO AT NBS IS OESCRIBEO IN THIS REPORT.

71120001 LOZIER, O. W., L. C. MAXIMON, W. L. SAOOWSKI, PERFORMANCE TEST REPORT ON NBS FORTRAN SINGLE PRECISION TANGENT AND COTANGENT, OIV. 650, OIV. 630, OEC 71, NBSR 10 646, 14 PLUS APPENOIXP, 3 REFS

THE INFORMATION PRESENTEO IN THIS REPORT CONTAINS THE RESULTS ON THE TESTING AND EVALUATION OF A MATHEMATICAL FUNCTION SUBROUTINE IN THE FORTRAN LIBRARY OF THE NBS UNIVAC 1108 COMPUTER. THE TESTING APPROACH OEVELOPEO BY THE AUTHORS IS BASEO ON THE USE OF HIGH PRECISION REFERENCE VALUES STOREO ON MAGNETIC TAPE. A ORIVER PROGRAM PERFORMS THE ACTUAL TESTING BY COMPARING THE VALUES FROM THE SUBROUTINE BEING TESTEO WITH THE REFERENCE VALUES.

72010001 RUTHBERG, ZELLA G., MANOELL BELLMORE, USER'S MANUAL FOR PROGRAM OEFENSE, OIV. 640, JAN 72, NBSR 10 821, OCA R.O.19-68, OCA R.O.19-69, OCA R.O.70-19, OCA R.O.71-36, 32 PLUS APPENOIXP, 2 REFS

A PROBLEM OF CONSIOERABLE INTEREST IN THE AREA OF MILITARY NETWORKS CONCERNS THE OPTIMAL ALLOCATION OF FUNDS TO BUILD OR REINFORCE A NETWORK IN SUCH A MANNER AS TO MAXIMIZE ITS RESISTANCE TO ATTACK. THE NETWORK IN QUESTION MIGHT BE A COMMUNICATION SYSTEM, AN OIL PIPELINE, A ROAO NETWORK, OR ANY ONE OF A NUMBER OF OTHER TYPES OF NETWORKS. IN GENERAL, THERE ARE A NUMBER OF USERS WHO HAVE NEEO OF THE NETWORK FOR TRANSPORTING ONE OR MORE COMMOOITIES. AN ATTACK ON SUCH A NETWORK IS CONSIOEREO SUCCESSFUL IF AND ONLY IF THE NETWORK IS NO LONGER USEFUL TO ANY OF ITS USERS. THE OEFENOER OF A NETWORK MUST USE HIS RESOURCES SO AS TO MAXIMIZE THE COST OF OESTROYING THE NETWORK. THE PROGRAM OEFENSE SOLVES THIS OEFENOER PROBLEM./

72010002 GRUEB, OANA S., LOUIS J. PALOMBO, TIME OF FLIGHT INTERFACE UNIT FOR COMPUTER RECORDING OF THERMAL NEUTRON FLIGHT TIMES, OIV. 650, JAN 72, NBSR 10 697, 22 PLUS APPENOICESP

THE PURPOSE OF THE TIME OF FLIGHT INTERFACE (TOF) IS TO PERMIT THE USE OF A POP-11 COMPUTER AND NP11-M ATTACHMENT WITH NEUTRON TIME OF FLIGHT EXPERIMENTS. THESE EXPERIMENTS REQUIRE THE ACCURATE COMPUTATION OF THE TIME OF FLIGHT FOR SEVERAL OIFFERENT ANGLES, WITH EACH EXPERIMENT HAVING ITS OWN PARTICULAR NUMBER OF ANGLES AND TIME INCREMENTS TO COMPUTE. THE CONFIGURATION OF THE SYSTEM USING TOF UNITS AND ITS CAPABILITIES IS OESCRIBEO.

72010003 MOORE, R. T., ACOUSTIC, ULTRASONIC AND VIBRATIONAL DISTURBANCES RESULTING FROM THE PENETRATION OF CONVENTIONAL STRUCTURAL BARRIERS, OIV. 650, JAN 72, NBSR 10 682, 132P

THIS REPORT OESCRIBES THE RESULTS OF A SERIES OF PENETRATION TESTS OF CONVENTIONAL STRUCTURAL MATERIALS WHICH WERE MADE AT 11 LOCATIONS IN TWO CONDEMNEO BUILOINGS IN BALTIMORE, MO. ON AUG. 23-25, 1971 USING READILY AVAILABLE TOOLS. THE

OBJECTIVES OF THESE TESTS WERE: (A) TO DEVELOP INFORMATION WHICH WOULD BE USEFUL IN ESTIMATING THE TIME REQUIRED TO MAKE AN OPENING LARGE ENOUGH FOR A SMALL MAN TO CRAWL THROUGH AND (B) COLLECT DATA ON THE VIBRATIONAL, ACOUSTIC AND ULTRASONIC DISTURBANCES PRODUCED BY THE TOOLS EMPLOYED IN THE ATTACKS.

72020001 WEGSTEIN, J. H., MANUAL AND COMPUTERIZED FOOTPRINT IDENTIFICATION, DIV. 600, JAN 72, TN-712, 12P

PART 1 DESCRIBES A MANUAL FOOTPRINT CLASSIFICATION SYSTEM THAT UTILIZES THE RIDGE PATTERNS ADJACENT TO THE TOES ON THE SOLE OF THE RIGHT FOOT. THE SYSTEM IS AN EXTENSION OF THE FBI FOOTPRINT CLASSIFICATION SYSTEM. PART 2 DESCRIBES A METHOD OF CODING MINUTE DETAILS OF THESE PRINTS FOR STORAGE IN A COMPUTERIZED FILE. THE COMPUTER CAN THEN SEARCH A SIMILARLY CODED UNKNOWN PRINT AGAINST THIS FILE AND IDENTIFY THE MOST LIKELY MATCHING PRINTS FROM THE FILE.

72053101 FINAL REPORT ON NBS PROJECT WHERE, IN SUPPORT OF USAAMCA PROJECT MNPLS, DIV. 630, 31 MAY 72, NBSR 10 859, 27 PLUS APPENDIXP

THIS REPORT SUMMARIZES THE WORK DONE AT NBS UNDER ITS PROJECT WHERE IN SUPPORT OF THE U.S. ARMY ADVANCED MATERIEL CONCEPTS AGENCY'S (USAAMCA) PROJECT MNPLS (MICRO NAVIGATION AND POSITION LOCATION SYSTEM).

72060009 WEGSTEIN, J. H., MANUAL AND AUTOMATED FINGERPRINT REGISTRATION, DIV. 600, JUN 72, TN-730, 26P

A METHOD IS DESCRIBED FOR MANUALLY POSITIONING A FINGERPRINT SO THAT MANUALLY READ MINUTIAE DATA CAN BE SEARCHED BY COMPUTER AGAINST A FILE OF FINGERPRINT DATA THAT HAS BEEN PREVIOUSLY READ BY MACHINE. A PROCEDURE IS ALSO DESCRIBED WHEREBY A COMPUTER CAN UTILIZE MACHINE-READ RIDGE-DIRECTION DATA IN MANIPULATING MINUTIAE DATA TO EFFECT A REGISTRATION OF THE FINGERPRINT PRIOR TO FILING ITS MINUTIAE DATA.

72060010 TREU, SIEGFRIED, TRANSPARENT STIMULATION OF A COMPUTER USER, DIV. 650, JUN 72, NBSR 10 863, 29P, 5 REFS

THIS REPORT DESCRIBES THE DETAILED GROUNDWORK FOR THE 'TRANSPARENT STIMULATION' PROJECT CARRIED OUT BY THE AUTHOR DURING HIS ONE-YEAR APPOINTMENT WITH THE COMPUTER SYSTEMS SECTION OF CCST. THE WORK INVOLVED THE DESIGN, IMPLEMENTATION AND TESTING OF A COMPUTER TERMINAL NETWORK ENABLING TRANSPARENT STIMULATION OF A SEARCHER OF AN ON-LINE RETRIEVAL SYSTEM. A BROADER DESCRIPTION, INCLUDING THE GENERAL RATIONALE, IS TO BE FOUND IN NBS TECHNICAL NOTE 732.

72063001 REITWIESNER, GEORGE W., POLICING TRANSCRIPTION AND TRANSPOSITION ERRORS BY A SINGLE CHECK DIGIT MODULO 10 AND 11, DIV. 600, 30 JUN 72, NBSR 10 886, 24P

IN USING A SINGLE CHECK DIGIT TO POLICE SINGLE TRANSCRIPTION ERRORS AND SINGLE TRANSPOSITION ERRORS BETWEEN ADJACENT DIGIT POSITIONS IN A DECIMAL STRING OF ARBITRARY LENGTH, TWO PERMUTATIONS (ONE OF WHICH MAY BE THE IDENTITY PERMUTATION) MAY BE EMPLOYED IN ALTERNATING DIGIT POSITIONS TO DETERMINE WEIGHTS WHICH YIELD SOME PREASSIGNED VALUE (E.G. ZERO) WHEN ADDED WITH RESPECT TO AN ASSIGNED MODULUS. VIABLE VALUES OF THAT MODULUS ARE 10 AND 11, EACH ACCOMPANIED BY SOME CONSTRAINT.

72063002 REITWIESNER, GEORGE W., A SET OF PROBLEMS TO EVALUATE SCIENTIFIC COMPUTERS, DIV. 600, 30 JUN 72, NBSR 10 883, 14P

THIS WRITING RECORDS THE DETAILED TEXT OF A SET OF THIRTEEN PROBLEMS USED BY THE NATIONAL BUREAU OF STANDARDS EARLY IN 1961 TO COMPARATIVELY EVALUATE ELECTRONIC DIGITAL COMPUTERS.

72063009 ABRAMS, MARSHALL D., JEROME A. HUDSON, PAUL MEISSNER, THOMAS N. PYKE, JR., ROBERT ROSENTHAL, FRANK H. ULMER, USE OF COMPUTER NETWORKS IN SUPPORT OF INTERACTIVE GRAPHICS FOR COMPUTER-AIDED DESIGN AND ENGINEERING, DIV. 650, 30 JUN 72, NBSIR 73-217, AEC 72-90013, 44P

THIS REPORT COVERS WORK PERFORMED BETWEEN 1 JULY 1971 AND 30 JUNE 1972 AS PART OF A LONG-TERM STUDY OF INTERACTIVE

COMPUTER-AIDED TECHNIQUES. THE PRIMARY EMPHASIS DURING THIS PERIOD HAS BEEN ON INVESTIGATING THE FEASIBILITY OF USING COMPUTER NETWORKS IN SUPPORT OF INTERACTIVE GRAPHICS FOR COMPUTER-AIDED DESIGN AND ENGINEERING. ALTERNATIVE MEANS FOR PROVIDING REMOTE COMPUTER SERVICE HAVE BEEN STUDIED. AN EXPERIMENTAL CONFIGURATION HAS BEEN DEVISED TAKING ADVANTAGE OF THE FACT THAT THERE IS LOCATED AT THE NATIONAL BUREAU OF STANDARDS A NODE OF THE ARPA COMPUTER NETWORK. ARRANGEMENTS WERE MADE VIA THIS CONFIGURATION FOR USERS AT THE ELECTRONICS COMMAND TO UTILIZE A STRUCTURAL DESIGN PROGRAM, NASTRAN, AT A REMOTE COMPUTER SITE. EMPHASIS HAS BEEN PLACED ON THE EVALUATION OF PERFORMANCE OF INTERACTIVE DESIGN TECHNIQUES USING DISPLAYS SUPPORTED BY LOCAL AND REMOTE COMPUTERS IN A HIERARCHICAL ARRANGEMENT. A VARIETY OF PROBLEMS ARE IDENTIFIED WHICH MUST BE CONSIDERED IN ORDER TO SUPPORT INTERACTIVE GRAPHICS VIA A COMPUTER NETWORK; THESE ARE COMPOUNDED WHERE THE NETWORK ITSELF IS IN AN EVOLVING STATE OF DEVELOPMENT. THIS REPORT INCLUDES AN OUTLINE OF A SYNCHRONOUS COMMUNICATION PROTOCOL WHICH WAS DEVELOPED FOR USE BETWEEN ECOM AND NBS.

72070001 GELLER, SIDNEY B., PAUL A. MANTEK, CALIBRATION OF SECONDARY STANDARD MAGNETIC TAPE CASSETTES (COMPUTER AMPLITUDE REFERENCE) PHASE I, DIV. 650, JUL 72, TN-731, 55P, 2 REFS

THIS TECHNICAL NOTE DISCUSSES A METHOD FOR DEVELOPING AND MAINTAINING A REFERENCE SYSTEM WHICH WILL PRODUCE NBS SECONDARY STANDARD MAGNETIC TAPE CASSETTES (COMPUTER AMPLITUDE REFERENCE). IT DESCRIBES BOTH THE CENTERLINE TAPE SEARCH PROCEDURES AND AN INTERIM SIGNAL AMPLITUDE MEASUREMENT SYSTEM FOR THE REFERENCE MAGNETIC TAPE CASSETTE CANDIDATES. THE RESULTS OF THE INITIAL EXPERIMENTS WITH CASSETTE TAPES AND TRANSPORTS ARE GIVEN.

72070002 TREU, SIEGFRIED, A COMPUTER TERMINAL NETWORK FOR TRANSPARENT STIMULATION OF THE USER OF AN ON-LINE RETRIEVAL SYSTEM, DIV. 650, JUL 72, TN-732, 39P, 22 REFS

A COMPUTER TERMINAL NETWORK TO ENABLE 'TRANSPARENT STIMULATION' OF THE USER OF AN ON-LINE RETRIEVAL SYSTEM HAS BEEN DESIGNED, IMPLEMENTED, AND PILOT TESTED. ITS BASIC PURPOSE IS TO PROVIDE A SUITABLE AND EFFECTIVE FRAMEWORK AND METHODOLOGY FOR EXPERIMENTAL IDENTIFICATION/VALIDATION OF THOSE HUMAN CHARACTERISTICS WHICH SHOULD BE RECOGNIZED/REINFORCED IN MAN-COMPUTER INTERFACE DESIGN. THE RATIONALE BEHIND THE TRANSPARENT STIMULATION APPROACH IS PRESENTED AND THE METHODOLOGY EMPLOYED FOR SUCH REAL-TIME, UNOBTRUSIVE SCANNING AND MANIPULATION OF THE MAN-COMPUTER DIALOGUE IS DESCRIBED. A GENERAL OVERVIEW OF THE HARDWARE AND SOFTWARE FEATURES OF THE IMPLEMENTED STIMULATION NETWORK IS INCLUDED.

72070003 GELLER, SIDNEY B., THE EFFECTS OF MAGNETIC FIELDS ON MAGNETIC STORAGE MEDIA USED IN COMPUTERS, DIV. 650, JUL 72, TN-735, 35P

EXPERIMENTS HAVE BEEN PERFORMED WITH DIFFERENT TYPES OF MAGNETS TO DETERMINE THEIR EFFECTS ON THE INFORMATION STORED ON MAGNETIC STORAGE MEDIA. THE TESTS RESULTS THAT WERE OBTAINED WITH RECORDED COMPUTER TAPES ARE DISCUSSED AND GUIDELINES ARE SUGGESTED TO COMPUTER INSTALLATION MANAGERS FOR PROTECTING THEIR RECORDED TAPES, DISKS AND DRUMS AGAINST UNWARRANTED ERASURE BY MAGNETIC FIELDS. THE EFFECTS OF OTHER FORMS OF ENERGY ON RECORDED MAGNETIC MEDIA ARE BRIEFLY CONSIDERED.

72090001 GELLER, SIDNEY B., A UNIVERSAL DROPOUT TESTER FOR MAGNETIC STORAGE MEDIA, DIV. 650, SEP 72, TN-739, 32P

THIS TECHNICAL NOTE DESCRIBES A SIGNAL DROPOUT DETECTION AND COUNTING SYSTEM WHICH WAS DESIGNED TO MAKE MEASUREMENTS ON 1/2 INCH MAGNETIC COMPUTER TAPE, MAGNETIC INSTRUMENTATION TAPES AND MAGNETIC CASSETTE TAPES AS REQUIRED BY EXISTING AND POTENTIAL FEDERAL SPECIFICATIONS. THE CALIBRATION AND OPERATIONAL PROCEDURES FOR THE SYSTEM ARE DESCRIBED IN DETAIL.

72090009 HORN, W. A., SCHEDULING JOBS ON A COMPUTER, DIV. 630, SEP 72, NBSR 10 914, 6P, 1 REFS

THE PROBLEM OF SCHEDULING WORK ON A COMPUTER SYSTEM IS COMPLICATED BY THE FACT THAT VARIOUS JOBS USE DIFFERENT PARTS OF THE SYSTEM FOR VARYING AMOUNTS OF TIME AND, BECAUSE OF THE ADVANCES IN SIMULTANEOUS PROCESSING TECHNIQUES, THIS SOMETIMES CREATES A SITUATION WHERE THE TOTAL TIME FOR COMPLETION OF A SET OF TWO OR MORE JOBS IS LESS THAN THE SUM OF THE TIMES FOR THE INDIVIDUAL TASKS. THE PROBLEM IS FURTHER COMPLICATED BY THE FACT THAT THE AMOUNTS OF TIME REQUIRED BY A GIVEN

JOB ON VARIOUS PARTS OF THE SYSTEM ARE NOT PREDICTABLE EXACTLY, BUT ONLY PROBABILISTICALLY, AND THE POINT AT WHICH THEY OCCUR IN THE PROCESSING TASK IS ALSO KNOWN ONLY PROBABILISTICALLY. A SIMPLIFIED APPROACH HAS BEEN TAKEN IN THIS PAPER, TO IMPROVE RATHER THAN OPTIMIZE THE OPERATION OF THE SYSTEM.

72100004 ANDERSON, RUTH K., INDEX OF DATA MANAGEMENT SOFTWARE PACKAGES, DIV. 640, OCT 72, NBSR 10 932, 36P. 14 REFS

IN THE CONTEXT OF THIS REPORT, GENERAL-PURPOSE DATA MANAGEMENT SOFTWARE HAS BEEN DEFINED TO BE SOFTWARE WHICH IS APPLICATION INDEPENDENT AND WHICH PROVIDES AT LEAST ONE OF THE BASIC DATA HANDLING FUNCTIONS OF FILE DEFINITION, FILE CREATION, FILE MAINTENANCE, QUERY, RETRIEVAL AND REPORT GENERATION, DEVELOPMENT OF AN INDEX OF GENERAL-PURPOSE DATA MANAGEMENT SOFTWARE PACKAGES HAS USED AS PRINCIPAL SOURCES FROM WHICH INFORMATION HAS BEEN ASSEMBLED PUBLISHED SURVEYS, SOFTWARE INDEXES, FEDERALLY SPONSORED STUDIES, PRODUCT ADVERTISEMENTS AND TRADE JOURNALS. THE ACCOMPANYING INDEX IN A LISTING OF CURRENTLY AVAILABLE PACKAGES, BOTH PROPRIETARY AND GOVERNMENT OWNED, CONTAINING BASIC DESCRIPTIVE INFORMATION TO ENABLE AN INITIAL SCREENING.

72120001 MOORE, R. T., PENETRATION RESISTANCE TESTS OF REINFORCED CONCRETE BARRIERS, DIV. 650, DEC 72, NBSIR 73-101, IACRO-ONA-ED 72-201, IACRO-DNA-ED 73-406, 81P

THIS REPORT DESCRIBES THE RESULTS OF A SERIES OF PENETRATION TESTS ON SIX CONCRETE SLABS. THE TESTS WERE CONDUCTED AT THE U. S. ARMY CORPS OF ENGINEERS CONSTRUCTION ENGINEERING RESEARCH LABORATORY IN CHAMPAIGN, ILLINOIS, DURING THE PERIOD OF OCTOBER 31 THROUGH NOVEMBER 3, 1972. SEVERAL ALTERNATIVE METHODS OF ATTACK WERE EMPLOYED, AND THE TIME TO PENETRATE, AND IN SOME INSTANCES, TO PRODUCE A 96-SQUARE INCH OPENING, WAS MEASURED, AND ESTIMATES WERE DEVELOPED REGARDING THE ACOUSTIC, ULTRASONIC AND VIBRATIONAL DISTURBANCES PRODUCED BY THE ATTACKS.

DEPENDING UPON THE ATTACK TECHNIQUES, A MAN-PASSABLE OPENING CAN BE MADE IN FOUR-INCH THICK REINFORCED CONCRETE IN TIMES RANGING FROM 4 TO NEARLY 15 MINUTES, THE CORRESPONDING TIMES FOR EIGHT-INCH THICK REINFORCED REGULAR CONCRETE RANGE FROM ABOUT 7 TO 25 MINUTES AND FROM ABOUT 20 TO 30 MINUTES FOR FIBROUS CONCRETE.

WITH THE EXCEPTION OF THE DIAMOND CORE DRILL, DETECTION SHOULD BE RELATIVELY EASY BY THE COMBINED ACOUSTIC, ULTRASONIC OR VIBRATIONAL DISTURBANCES PRODUCED BY THE ATTACKS EVEN THOUGH NOT ALL ATTACK TECHNIQUES PRODUCE ALL THREE TYPES OF DISTURBANCES.

72123101 STEIN, PHILIP G., ANNE H. MEININGER, A TECHNICAL MANUAL FOR THE SPECTRE II COMPUTER-CONTROLLED MICROSCOPE, DIV. 650, 31 DEC 72, NBSR 10 962, NC1-(69)-49, 38 PLUS APPENDIXP, 6 REFS

THE SPECTRE II SYSTEM IS A GENERAL-PURPOSE COMPUTER OPTICAL MICROSCOPE USED PRIMARILY FOR GATHERING OF SOURCE DATA FOR COMPUTER PROCESSING OF BIOLOGICAL IMAGES. THE SYSTEM WAS FUNDED AND CONSTRUCTED AT THE NATIONAL INSTITUTES OF HEALTH, BUT SOME OF THE DESIGN AND CONSTRUCTION WAS ACCOMPLISHED BY THE NATIONAL BUREAU OF STANDARDS. THIS REPORT DOCUMENTS THOSE PARTS OF THE SYSTEM.

IN THE COURSE OF THE DESIGN AND DEVELOPMENT OF THE EQUIPMENT, MANY TESTS OF THE PERFORMANCE AND OTHER CHARACTERISTICS OF THE EQUIPMENT WERE MEASURED. SOME RESULTS OF THESE TESTS ARE INCLUDED HEREIN, AS ARE PROCEDURES FOR OPERATION AND ALIGNMENT OF MOST OF THE EQUIPMENT. THE NATURE OF THE TESTS AND THE PROCEDURES USED ARE NOT, IN GENERAL, SHOWN HERE. IN THE CASES WHERE THIS INFORMATION IS NEEDED, IT MAY BE OBTAINED ON APPLICATION TO THE AUTHORS.

73010001 GRAY, K. M., J. R. ELLIS, FIELD SERVICE TEST MODEL: COMPUTER-CONTROLLED U SYSTEM, OPERATIONS MANUAL AND SOFTWARE OPERATING SYSTEM APPENDICES FOR THE AUTOMATED SYSTEM, VOLUME I, DIV. 650, JAN 73, NBSIR 74-453, AFTAC T-2301-U-NBS, AFTAC 4307-U-NBS, 317P

VOLUME I OF THE 'AUTOMATED U SYSTEM' DESCRIBES THE SOFTWARE LISTINGS AND THE OPERATOR'S MANUAL. THIS VOLUME IS INTENDED TO INSTRUCT THE STATION TECHNICIAN IN THE PROCEDURE TO LOAD PROGRAMS AND OPERATE, UNDER COMPUTER CONTROL, THE AUTOMATED U SYSTEM.

73030001 FONG, ELIZABETH. A SET OF DEBUGGING AND MONITORING FACILITIES TO IMPROVE DIAGNOSTIC CAPABILITIES OF A COMPILER, DIV. 40, MAR 73, TN-763, 25P, 13 REFS

INCREASING CONCERN WITH THE QUALITY OF COMPUTER SOFTWARE TODAY MAKES IT IMPORTANT TO EVALUATE CRITICALLY THE DEBUGGING FACILITIES AVAILABLE IN HIGH-LEVEL LANGUAGES. THIS PAPER PRESENTS A COLLECTION OF PROGRAM DEBUGGING AND MONITORING FACILITIES TO IMPROVE THE DIAGNOSTIC CAPABILITIES OF A COMPILER. A DISTINCTION IS MADE BETWEEN DEBUGGING AND MONITORING FACILITIES PERFORMED AT COMPILE TIME, AT LINK/LOAD TIME AND AT EXECUTION TIME. THESE FACILITIES ARE DESCRIBED IN TERMS OF THIS BREAKDOWN WITH A CONSCIOUS ATTEMPT TO MOVE THE DETECTION OF ERRORS FROM EXECUTION TIME TO COMPILE OR LINK/LOAD TIME, AND TO COLLECT INFORMATION WHEN THE INFORMATION IS AVAILABLE DURING THE COMPILATION PROCESS.

73050001 GRUBB, DANA S., DATA COMMUNICATIONS SYSTEM THROUGHPUT PERFORMANCE USING HIGH SPEED TERMINALS ON THE DIAL TELEPHONE NETWORK, DIV. 650, MAY 73, TN-779, 40P, 7 REFS

THROUGHPUT PERFORMANCE OF HIGH SPEED DATA TERMINALS USING THE DIAL TELEPHONE NETWORK IS CALCULATED FOR SIGNALING RATE OF 1200 TO 4800 BITS PER SECOND USING THE ANSI X3.28-1971 CONTROL PROCEDURES AND MEASURED IN TERMS OF THE PROPOSED ANSI STRAND TRIB DESCRIBED IN X3S35/80. THE PERFORMANCE CALCULATIONS ARE SHOWN GRAPHICALLY WITH TRIB AS A FUNCTION OF BLOCK LENGTH, ERROR RATES OF THE TELEPHONE CONNECTION, SIGNALING RATE AND TELEPHONE LINE DELAYS. ERROR RATES ARE BASED ON A PUBLISHED SURVEY INVOLVING SEVERAL HUNDRED TELEPHONE CONNECTIONS TO GEOGRAPHICALLY DISTRIBUTED PARTS OF THE UNITED STATES./

73060001 REED, SUSAN K., MARTHA M. GRAY, CONTROLLED ACCESSIBILITY BIBLIOGRAPHY, DIV. 640, DIV. 660, JUN 73, TN-780, ISP

A BIBLIOGRAPHY OF 96 REFERENCES ON CONTROLLED ACCESSIBILITY HAS BEEN COMPILED. THE PURPOSE IN COMPILING THIS LIMITED BIBLIOGRAPHY WAS TO FREE THE EFFORT TO SOLVE THE PROBLEMS OF CONTROLLED ACCESSIBILITY FROM DOMINATION BY DISCUSSION OF THE ISSUES OF PRIVACY. INSOFAR AS POSSIBLE, EXCEPT WHEN THE TWO SUBJECTS ARE REFERRED TO IN THE SAME WORK OR FOR OVERRIDING HISTORICAL CONSIDERATIONS, REFERENCES DEALING WITH PRIVACY HAVE NOT BEEN INCLUDED.

73060002 MARRON, BEATRICE A. S., ELIZABETH FONG, DENNIS W. FIFE, KIRK RANKIN, A STUDY OF SIX UNIVERSITY-BASED INFORMATION SYSTEMS A STUDY OF SIX UNIVERSITY-BASED INFORMATION SYSTEMS, DIV. 640, JUN 73, TN-781, 98P

A METHODOLOGY FOR CATEGORICALLY DESCRIBING COMPUTER-BASED INFORMATION SYSTEMS WAS DEVELOPED AND APPLIED TO SIX UNIVERSITY-BASED, NSF-SUPPORTED SYSTEMS. THE SYSTEMS UNDER STUDY ALL OPERATE AS RETAIL INFORMATION CENTERS PRIMARILY SERVING CAMPUS COMMUNITIES BY ACCESSING LARGE COMMERCIALLY-AVAILABLE DATA BASES USING 3RD GENERATION COMPUTER CONFIGURATIONS. THE SYSTEMS VARY IN DESIGN PHILOSOPHY, MODE OF USER SERVICE, TRANFERABILITY CHARACTERISTICS, AND OPERATIONAL STATUS. A SUMMARY MATRIX IS INCLUDED.

73060003 SALTMAN, ROY G., GLORIA R. BOLOTSKY, ZELLA G. RUTHBERG, HEURISTIC COST OPTIMIZATION OF THE FEDERAL TELPAK NETWORK, DIV. 640, JUN 73, TN-787, OCA 1-38859, 52P

A HEURISTIC METHOD OF OPTIMIZING THE DESIGN OF A VERY LARGE COMMUNICATIONS NETWORK IS DESCRIBED. THE PROCEDURE IS EMPLOYED TO CONFIGURE THE ROUTES OF 5552 COMMUNICATIONS SERVICE REQUESTS INVOLVING 1633 NODES. A FORTRAN IV PROGRAM WAS DEVELOPED TO SOLVE FOR ACTUAL NEEDS OF THE DEFENSE COMMUNICATIONS AGENCY FOR LEASED-LINE SERVICE EMPLOYING THE TELPAK TARIFF STRUCTURE.

73060004 HOLBERTON, FRANCES E., ELIZABETH G. PARKER, NBS FORTRAN TEST PROGRAMS, VERSION 1 AND VERSION 3, DIV. 640, JUN 73, NBSIR 73-250, 272P

THE NBS FORTRAN TEST PROGRAMS, WRITTEN IN STANDARD FORTRAN, ARE DESIGNED TO TEST WHETHER A FORTRAN COMPILER ACCEPTS THE FORMS AND INTERPRETATIONS OF THE FORTRAN LANGUAGE AS DESCRIBED IN THE AMERICAN NATIONAL STANDARD FORTRAN DOCUMENT X3.9-1966. THE TEST PROGRAMS ARE RECORDED ON MAGNETIC TAPE IN APPROXIMATELY 14,500 PUNCH CARD IMAGES, AND COMPRISE 116 TEST UNITS. THE TEST UNITS MAY BE USED AS SEPARATE EXECUTABLE FORTRAN PROGRAMS, OR MAY BE LINKED END TO END WITH OTHER TEST UNITS, WITH A MINIMUM OF USER EFFORT, TO IMPROVE OPERATING EFFICIENCY. AN ADDITIONAL COPY OF THESE 116 TEST UNITS

STRUCTURED INTO I4 EXECUTABLE PRDGRAMS AND THE DDCUMENTATION SUPPDRTING THE TEST PROGRAMS ARE INCLUDED IN THE DISTRIBUTIDN.
THE TEST PRDGRAM DESIGN CRITERIA WAS TO: I) CONSTRAIN ALL TEST PROGRAMS TD THE FDRTRAN STANDARD X3.9-1966, 2) REDUCE THE EFFECT DF THOSE AREAS IN WHICH THE FDRTRAN STANDARD DDES NOT PRESCRIBE A METHDD DR SOLUTION, E.G., RANGE, PRECISIDN, SIZE DF COMPUTER, ETC., 3) SIMPLIFY THE USE DF THE FDRTRAN TEST PROGRAMS, 4) TEST FORTRAN LANGUAGE ELEMENTS BEFORE THEY ARE USED IN SUPPORT OF DTHER TESTS, AND 5) MAINTAIN AN OPEN ENDED SYSTEM SO THAT TESTS MAY BE CHANGED DR ADDED. THE TEST PROGRAMS REQUIRE THE USE OF A CARD READER, PRINTER AND ONE INTERMEDIATE TAPE UNIT.

73060401 MDORE, R. T., PENETRATIDN TESTS DN J-SIIDS BARRIERS, DIV. 650, 4 JUN 73, NBSIR 73-223, IACRD-DNA-ED 72-201, IACRD-DNA-ED 73-406, 84P

A SERIES DF PENETRATIDN TESTS WERE MADE DN THREE SIMULATED ARMS RDDMS WHICH INCORPORATED A VARIETY OF STRUCTURAL BARRIERS WHICH WERE INTENDED TO BE REPRESENTATIVE OF THE BRDAD RANGE OF CONSTRUCTION LIKELY TD BE ENCDUNTERED IN EXISTING ARMS RDDMS.
THE DBSERVED PENETRATION TIMES VARIED FRDM 1.3 MINUTES FDR A DDUBLE-PLANKED WDDDED WALL, 11.31 MINUTES FOR AN EIGHT-INCH THICK, REINFDRCED CDNCRETE WALL AND UP TD 18.27 MINUTES FDR A GSA CLASS 6 VAULT DOOR. ALL PENETRATIONS WERE MADE WITH PDRTABLE READILY AVAILABLE TOOLING AND PRDDUCED ACOUSTICAL DR VIBRATIDNAL DR BOTH TYPES OF DISTURBANCES WHICH ARE READILY DETECTABLE.
THE TESTS RESULTS PROVIDE A BASIS FOR ESTIMATING THE TIME IN WHICH RESPONSE TD AN INTRUSION ALARM MUST DCCUR IN ORDER TO ADEQUATELY SAFEGUARD AN ARMS RDDM, A COMPUTER RDDM OR ANY OTHER SENSITIVE AREA.

73063001 TREU, SIEGFRIED, CHARACTERIZATIDN AND TESTING DF INTERACTIVE GRAPHICS FDR CDMPUTER-AIDED DESIGN AND ENGINEERING, DIV. 650, 30 JUN 73, NBSIR 73-289, AEC 72-90013, 33P, 12 REFS

THIS REPDRT PRESENTS MATERIAL DEVELDPED AS PART DF A LONG-TERM 'INTERACTIVE COMPUTER-AIDED TECHNIQUES STUDY'. THE REPORT OUTLINES THE STAGES OF DEVELOPMENT IN THE UTILIZATION OF INTERACTIVE GRAPHICS AS A TOOL FOR COMPUTER-AIDED DESIGN AND ENGINEERING (CAD/E). A SERIES OF CHARACTERISTICS ARE PRESENTED WHICH ARE OF SIGNIFICANCE TO THE DESIGNERS AND USERS OF SUCH SYSTEMS AND A SERIES DF QUESTIDNS OF EVALUATIVE INTEREST POSED. THESE QUESTIONS ARE INTENDED TO DELINEATE THE EXTENT TO WHICH A SYSTEM UNDER EXAMINATIDN ACHIEVES ITS STATED DESIGN OBJECTIVES. THE CHARACTERISTICS ARE GROUPED IN ACCORDANCE WITH THE NATURE AND COMPLEXITY DF THE EXPERIMENTS WHICH WOULD NEED TO BE CONDUCTED TO ESTABLISH VALUES FOR THEM. THE REPORT SUGGESTS SELECTED CHARACTERISTICS OF PARTICULAR INTEREST AND SUGGESTS THE DESIGN OF EXPERIMENTS FOR EXAMINING THEM IN DETAIL. THE REPDRT MAKES SPECIFIC REFERENCE TD THE MEDEA DESIGN CONCEPT UNDER DEVELOPMENT WITHIN THE GRAPHICAL SYSTEMS AND TECHNDLOGY BRANCH DF ECDM.

73071101 GRAY, K. M., J. R. ELLIS, FIELD SERVICE TEST MODEL: COMPUTER-CONTROLLED U SYSTEM. OPERATIONS MANUAL AND SDFTWARE OPERATING SYSTEM APPENDICES FDR THE AUTDMATED SYSTEM. VDLUME II, DIV. 650, 11 JUL 73, NBSIR 73-235, AFTAC T-2301-U-NBS, 347P

VDLUME II DF THE 'AUTDMATED U SYSTEM' DESCRIBES THE SOFTWARE LISTINGS AND THE DPERATOR'S MANUAL. THIS VDLUME IS INTENDED TD INSTRUCT THE STATION TECHNICIAN IN THE PROCEDURE TD LOAD PROGRAMS AND DPERATE, UNDER COMPUTER CDNTROL, THE AUTOMATED U SYSTEM.

73071102 CARPENTER, ROBERT J., K. M. GRAY, DANA S. GRUBB, LDUIS J. PALDMBO, FIELD SERVICE TEST MDDEL: COMPUTER-CDNTROLLED U SYSTEM MANUAL FOR TEST UNIT, DIV. 650, 11 JUL 73, NBSIR 73-236, AFTAC T-2301-U-NBS, 93P

THIS MANUAL DESCRIBES THE CONSTRUCTION AND USE OF A HIGHLY SPECIALIZED TEST UNIT FDR USE WITH CERTAIN CDMPUTER-CDNTRDLLED VERY LDW FREQUENCY RECEIVERS AND THEIR ASSOCIATED INTERFACE (ADACS) UNITS.

73082301 CARPENTER, ROBERT J., K. M. GRAY, DANA S. GRUBB, LDUIS J. PALDMBO, FIELD SERVICE TEST MODEL: COMPUTER-CONTROLLED U SYSTEM MANUAL FOR SYSTEM. INSTRUCTION MANUAL, DIV. 650, 23 AUG 73, NBSIR 73-271, AFTAC T-230-U-NBS, 22P

THIS MANUAL CONTAINS AN OVERVIEW OF THE U SYSTEM, WHICH USES A SMALL COMPUTER TO PROVIDE AUTOMATIC CONTROL OF UP TO 15 SPECIAL-PURPOSE RADIO RECEIVERS. THE DIAGRAMS SHOW THE OVERALL SYSTEM CONFIGURATION, CABLING, DATA FLOW AND COMPUTER WORD BIT ASSIGNMENTS.

73082302 CARPENTER, ROBERT J., K. M. GRAY, OANA S. GRUBB, LOUIS J. PALOMBO, FIELD SERVICE TEST MODEL: COMPUTER-CONTROLLED U SYSTEM MANUAL FOR COMPUTER SUBSYSTEM, DIV. 650, 23 AUG 73, NBSIR 73-270, AFTAC T-2301-U-NBS, 8P

THIS MANUAL CONTAINS A DESCRIPTION OF THE COMPUTER SUBSYSTEM USED TO CONTROL THE OPERATION OF THE RECEIVERS IN THE U SYSTEM. THE DIAGRAMS SHOW THE CONNECTION OF THE COMPUTER SUBSYSTEM TO THE OTHER UNITS IN THE SYSTEM, THE ARRANGEMENT OF THE COMPONENTS WITHIN THE COMPUTER SUBSYSTEM, AND THE CARD LOCATIONS IN THE I/O INTERFACE PORTION OF THE COMPUTER SUBSYSTEM./

73090001 BLANC, ROBERT P., IRA W. COTTON, THOMAS N. PYKE, JR., SHIRLEY W. WATKINS, ANNOTATED BIBLIOGRAPHY OF THE LITERATURE ON RESOURCE SHARING COMPUTER NETWORKS, DIV. 650, SEP 73, NBS-SP-384, NSF AG-350, 9SP

THIS BIBLIOGRAPHY CONSISTS OF REFERENCES WITH CRITICAL ANNOTATIONS TO THE LITERATURE ON COMPUTER NETWORKS. A CLASSIFICATION SCHEME HAS BEEN DEVELOPED TO PLACE EACH ANNOTATION IN A CATEGORY REFLECTIVE OF ITS CONTENT. FIVE INDEXES TO THE BIBLIOGRAPHY ARE INCLUDED: AUTHOR INDEX, CORPORATE AUTHOR INDEX, NETWORK INDEX, KEYWORD OUT OF CONTEXT INDEX, AND REPORT NUMBER INDEX.

73100001 NEUMANN, ALBRECHT J., REVIEW OF NETWORK MANAGEMENT PROBLEMS AND ISSUES, DIV. 640, OCT 73, TN-795, 77P, 26 REFS

COMPUTER NETWORKING IS BROADLY CONSIDERED INCLUDING HARDWARE, SOFTWARE, PROCEDURES AND PEOPLE. NETWORKING ENCOMPASSES MANY ACTIVITIES; SUCH AS, CREATION OF NETWORK PRODUCTS, DISTRIBUTION PROCESSESS, USER ACTIVITIES, AND SUPPORTING SERVICES LIKE MARKETING, DOCUMENTATION, INFORMATION SERVICES AND MAINTENANCE. NETWORK MANAGEMENT COVERS BOTH THE ESTABLISHMENT OF NETWORKING OPERATIONS AND ACTUAL OPERATION OF THE NETWORK FACILITIES. IT INCLUDES ALL MANAGEMENT FUNCTIONS PERFORMED AT SUCH NETWORK NODES AS COMPUTING CENTERS, DOCUMENTATION FACILITIES, AND SERVICE DISTRIBUTION CENTERS. IN ORDER TO SURVEY THE PROBLEMS FACING DEVELOPMENT OF NETWORK MANAGEMENT, USER REQUIREMENTS AND SYSTEM REQUIREMENTS ARE OUTLINED IN A QUALITATIVE MANNER. EXAMPLES OF POLITICAL, ECONOMIC AND LEGAL CONSTRAINTS ARE SUMMARIZED, SUCH AS THE ECONOMIC IMPACT OF EXTENDED NETWORKS ON REGIONAL AND LOCAL COMPUTING ACTIVITIES. CRITICAL ISSUES FOR NETWORKING MANAGEMENT, AND OTHER AREAS OF SIGNIFICANT MANAGEMENT CONCERN ARE OUTLINED. ORGANIZATIONAL ALTERNATIVES ARE CONCEIVED IN TERMS OF A FOUR LAYER ORGANIZATION MODEL. CONCLUSIONS DEAL WITH CONTINUING PROBLEM AREAS, THE NEED FOR A STRUCTURAL MODEL FOR NETWORK MANAGEMENT, CRITICAL EXPERIMENTS AND TASKS TO BE UNDERTAKEN TO FURTHER NETWORKING CAPABILITIES, AND A SUGGESTION TO ESTABLISH PLANNING TEAMS TO INITIATE SOME OF THE INITIAL STEPS REQUIRED FOR FURTHER NETWORKING DEVELOPMENT.

73100002 LYON, GORDON, DR., STATIC LANGUAGE ANALYSIS, DIV. 640, OCT 73, TN-797, 23P, 17 REFS

ALTHOUGH MANY VARIANTS OF PROGRAMMING LANGUAGES EXIST, LITTLE INFORMATION IS AVAILABLE ON HOW LANGUAGE FEATURES ARE ACTUALLY USED BY PROGRAMMERS. SEVERAL DATA COLLECTION SCHEMES ARE DISCUSSED HERE; EACH WOULD PROVIDE EMPIRICAL DATA ON LANGUAGE USE. SOME INTERNAL DETAILS ARE GIVEN FOR ANALYZERS FOR FORTRAN AND COBOL. IN ADDITION, A SUGGESTION IS MADE FOR A SPECIAL SYSTEMS OPTION WHICH WOULD ALLOW A COMPILER TO CONTINUOUSLY RECORD SOURCE STATEMENT CHARACTERISTICS OF PROGRAMS GIVEN TO IT.

73100003 NEUMANN, ALBRECHT J., USER PROCEDURES STANDARDIZATION FOR NETWORK ACCESS, DIV. 640, OCT 73, TN-799, 43P, 10 REFS

USER ACCESS PROCEDURES TO INFORMATION SYSTEMS HAVE BECOME OF CRUCIAL IMPORTANCE WITH THE ADVENT OF COMPUTER NETWORKS, WHICH HAVE OPENED NEW TYPES OF RESOURCES TO A BROAD SPECTRUM OF USERS. THIS REPORT SURVEYS USER ACCESS PROTOCOLS OF SIX REPRESENTATIVE SYSTEMS. FUNCTIONAL ACCESS REQUIREMENTS ARE OUTLINED, AND IMPLEMENTATION OF ACCESS PROCEDURES IS ANALYZED BY MEANS OF A COMMON METHODOLOGY.

QUALITATIVE ASSESSMENT OF STANDARDIZATION POSSIBILITIES IDENTIFY STANDARDIZATION CANDIDATES SUCH AS: SYSTEM AND USER SIGNALS, ON-LINE USER ENTRIES, SYSTEM REQUESTS, AND NETWORK WIDE CATEGORIES OF MESSAGE CONTENT.

73110001 STEWART, S. L., REPORT ON PLANNING SESSION ON SOFTWARE ENGINEERING HANDBOOK, DIV. 640, NOV 73, TN-832, 18P

THIS REPORT FROM A PLANNING COMMITTEE SPONSORED BY THE NATIONAL BUREAU OF STANDARDS, THE NATIONAL SCIENCE FOUNDATION, AND THE ASSOCIATION FOR COMPUTING MACHINERY DISCUSSES THE NEED FOR, COVERAGE OF, AND AUDIENCE FOR A PROPOSED SOFTWARE ENGINEERING HANDBOOK

73120001 NEUMANN, ALBRECHT J., NETWORK USER INFORMATION SUPPORT, DIV. 640, DEC 73, TN-802, 27P, 14 REFS

WITH INCREASING INTEREST IN THE DEVELOPMENT OF COMPUTER NETWORKS AND THE PROLIFERATION OF REMOTE ENTRY CAPABILITY FROM USER TERMINALS, USER SUPPORT TAKES ON NEW DIMENSIONS. SOME USER CHARACTERISTICS ARE OUTLINED AS THEY AFFECT USER SUPPORT. USER SUPPORT REQUIREMENTS ARE IDENTIFIED FOR TRAINING, TERMINAL OPERATION, AND GENERAL INFORMATION TO AID IN NETWORK OPERATIONS. SUPPORT CAPABILITIES INCLUDE ON-LINE AIDS, INFORMATION AVAILABLE ON REQUEST, AND TUTORIAL INFORMATION AVAILABLE AT THE TERMINAL. USER SUPPORT ALSO INCLUDES PERTINENT DOCUMENTATION AND HUMAN CONSULTATION. AREAS OF FUTURE RESEARCH ARE IDENTIFIED AS: INTERACTIVE LANGUAGE DESIGN, TUTORIAL DESIGN, INTEGRATION OF HARD-COPY AND ON-LINE CAPABILITIES, AND FURTHER DEVELOPMENT OF USER FEEDBACK CAPABILITY.

73120002 SIMMONS, RALPH A., GUIDELINES FOR THE USE OF COMPUTER TECHNOLOGY IN THE DEVELOPING COUNTRIES, DIV. 660, DEC 73, NBSIR 73-423, 169P

THE OBJECTIVE OF THIS REPORT IS TO CONTRIBUTE TO MORE EFFECTIVE USE OF COMPUTER TECHNOLOGY BY THE DEVELOPING COUNTRIES. AN INTENSIVE SURVEY OF COMPUTER USE AND DEVELOPMENT IN THE NINE SELECTED COUNTRIES AND AN ANALYSIS OF OTHER SUPPORTING DATA HAVE RESULTED IN THE FORMULATION OF SPECIFIC CONCLUSIONS. RECOMMENDATIONS FOR GUIDANCE OF RESPONSIBLE OFFICIALS IN THE DEVELOPING COUNTRIES AND IN THE AGENCY FOR INTERNATIONAL DEVELOPMENT HAVE BEEN DEVELOPED IN RESPONSE TO THE CONCLUSIONS AND ARE PRESENTED IN SUMMARY FORM. LATER SECTIONS OF THE REPORT INCLUDE THE FACTS AND DISCUSSIONS IN SUPPORT OF THE CONCLUSIONS, WITH EMPHASIS ON THE RESPONSIBILITIES OF THE NATIONAL GOVERNMENTS, THE PROBLEMS OF EDUCATION AND TRAINING, PRESENT COMPUTER APPLICATIONS, AND THE ROLE OF ADP STANDARDS. THE RESULTS OF THE INDIVIDUAL COUNTRY SURVEYS ARE INCLUDED IN THE APPENDIX. THE REPORT IS A PART OF JOINT EFFORTS ON THE PART OF THE DEPARTMENT OF COMMERCE AND THE AGENCY FOR INTERNATIONAL DEVELOPMENT TO BRING U. S. HIGH TECHNOLOGY MORE EFFECTIVELY TO BEAR ON THE PROBLEMS OF ECONOMIC AND SOCIAL DEVELOPMENT IN THE LESS-DEVELOPED COUNTRIES OF THE WORLD.

73121101 CARPENTER, ROBERT J., K. M. GRAY, DANA S. GRUBB, LOUIS J. PALOMBO, FIELD SERVICE TEST MODEL: COMPUTER-CONTROLLED U SYSTEM MANUAL FOR RECEIVER AND ADACS INTERFACE CHASSIS, DIV. 650, 11 DEC 73, NBSIR 73-227, 88P

THE FIELD SERVICE TEST MODEL USES A COMPUTER TO CONTROL THE OPERATION OF FROM 1 TO 15 EECO 881 RECEIVERS FOR UNATTENDED OPERATION. EACH RECEIVER IS CONNECTED TO THE COMPUTER BY AN ADACS INTERFACE CHASSIS, WHICH PROVIDES NECESSARY DECODING AND CONVERSION FOR COMMUNICATION BETWEEN THE RECEIVER AND THE COMPUTER. THIS MANUAL DESCRIBES THE OVERALL OPERATION OF THE SYSTEM, MODIFICATIONS NEEDED FOR THE RECEIVERS, AND CONSTRUCTION OF THE ADACS INTERFACE CHASSIS.

74010001 BERG, JOHN L., CODASYL DATA DESCRIPTION LANGUAGE JOURNAL OF DEVELOPMENT JUNE 1973, DIV. 640, JAN 74, NBS HB-113, 155P

THIS JOURNAL OF DEVELOPMENT REPORTS THE WORK OF THE CODASYL DATA DESCRIPTION LANGUAGE COMMITTEE. THE COMMITTEE WAS ASSIGNED THE TASKS OF ESTABLISHING 'WAYS TO AID THE FUNCTIONS OF DATA ADMINISTRATION AND SYSTEMS ADMINISTRATION'. THE COMMITTEE'S CHARTER INCLUDED, 'THE PROVISION OF SPECIFICATIONS FOR THE DECLARATIONS REQUIRED TO ESTABLISH AND MAINTAIN DATA BASE STRUCTURES'. AS A STEP TOWARDS THIS PURPOSE, THE JOURNAL CONTAINS THREE SECTIONS WHICH TREAT THE BACKGROUND AND HISTORY OF THE DATA DESCRIPTION LANGUAGE COMMITTEE, MAJOR CONCEPTS, AND THE SPECIFICATIONS OF THE DATA DESCRIPTION LANGUAGE. THE COMMITTEE BASED ITS WORK, IN PART, ON THE 1971 REPORT OF THE DATA BASE TASK GROUP REPORT.

THE APPROVED DATA DESCRIPTION LANGUAGE SPECIFICATIONS CONTAINS THE SYNTAX AND SEMANTIC RULES THAT PERMIT THE DESCRIPTION OF THE STRUCTURE AND CONTENTS OF A DATA BASE IN A LANGUAGE INDEPENDENT OF, BUT COMMON TO, MANY OTHER HIGH LEVEL PROGRAMMING LANGUAGES. THE LANGUAGE SPECIFICATIONS WILL HAVE A SIGNIFICANT IMPACT ON THE DEVELOPMENT OF FUNCTIONALLY

COMPATIBLE DATA BASE MANAGEMENT SYSTEMS AND WILL INCREASE THE PORTABILITY OF PROGRAMS BETWEEN DIFFERENT COMPUTER SYSTEMS. THOUGH NOT PART OF THE APPROVED LANGUAGE SPECIFICATIONS, THE PRESENTATION OF THE MAJOR CONCEPTS WILL HELP IN THE UNDERSTANDING OF THE SPECIFICATIONS. SIMILARLY, THE BACKGROUND AND HISTORY INFORMATION WILL HELP EXPLAIN THE EVOLUTIONARY GROWTH OF THE DATA DESCRIPTION LANGUAGE.

74010002 BLANC, ROBERT P., REVIEW OF COMPUTER NETWORKING TECHNOLOGY, DIV. 650, JAN 74, TN-804, 135P. 41 REFS

THIS REPORT GIVES A DESCRIPTIVE SUMMARY OF THE TECHNICAL CHARACTERISTICS OF EXISTING COMPUTER NETWORKS, INCLUDING DATA COMMUNICATION TECHNOLOGY AND CONFIGURATION RELATED TO SUPPORT OF RESOURCE SHARING SERVICES FOR A COMPUTER NETWORK. INCLUDED ARE DISCUSSIONS OF TERMINAL SUPPORT CAPABILITIES FOR THE COMMUNICATIONS NETWORK AND A DEVELOPMENT OF RELEVANT NETWORK TERMINOLOGY. THE REPORT CONCLUDES WITH A COMPARATIVE EVALUATION OF EXISTING TECHNOLOGICAL APPROACHES TO NETWORKING.

74010009 STILLMAN, RONA B., COMPUTER NETWORKING: APPROACHES TO QUALITY SERVICE ASSURANCE, DIV. 640, JAN 74, TN-800, 26P, 13 REFS

THE PROBLEM OF QUALITY SERVICE ASSURANCE IN A (GENERALIZED) COMPUTER NETWORKING ENVIRONMENT IS ADDRESSED. IN THE ABSENCE OF ANY DIRECT, WELL-DEFINED, QUANTITATIVE MEASURE OF SERVICE QUALITY AND RELIABILITY, ERROR COLLECTION AND ANALYSIS IS THE ONLY BASIS FOR SERVICE QUALITY CONTROL. THEREFORE, MECHANISMS ARE DESCRIBED WHICH FACILITATE REPORTING OF OPERATIONAL ERRORS, DOCUMENTATION OF ERROR CORRECTIONS, AND COLLECTION OF SYSTEM PERFORMANCE DATA. SINCE TECHNIQUES FOR HARDWARE QUALITY CONTROL ARE WELL KNOWN, THESE MECHANISMS FOCUS ON COLLECTING DATA WHICH CAN BE USED TO ASSESS AND CONTROL SOFTWARE QUALITY. FINALLY, SPECIFIC NETWORK FACILITIES ARE DESCRIBED WHICH SUPPORT RESEARCH IN THE AREA OF SOFTWARE QUALITY, AND POTENTIAL AREAS OF NEW RESEARCH USING THE NETWORK ARE IDENTIFIED.

74020001 COTTON, IRA W., NETWORK MANAGEMENT SURVEY, DIV. 650, FEB 74, TN-805, 91P

THIS REPORT PRESENTS THE RESULTS OF A STUDY OF MANAGEMENT PRACTICES IN DIFFERENT COMPUTER NETWORKS. FIVE NETWORKS WERE CHOSEN AS TYPICAL OF DIFFERENT APPROACHES TO NETWORK IMPLEMENTATION AND MANAGEMENT: DEFENSE ADVANCED RESEARCH PROJECTS AGENCY (ARPA) NETWORK, MERIT NETWORK, TRIANGLE UNIVERSITIES COMPUTATION CENTER (TUCC), OREGON STATE REGIONAL NETWORK AND TYMNET, A COMMERCIAL NETWORK. A COMMON FORMAT IS EMPLOYED TO SURVEY EACH NETWORK. WHILE THE REPORT IS NOT INTENDED TO BE PRESCRIPTIVE, SOME EMPIRICAL OBSERVATIONS ARE PRESENTED FOR EACH TOPIC COVERED.

74020002 RENNINGER, CLARK R., DENNIS K. BRANSTAD, GOVERNMENT LOOKS AT PRIVACY AND SECURITY IN COMPUTER SYSTEMS. SUMMARY OF A CONFERENCE HELD AT THE NATIONAL BUREAU OF STANDARDS, GAITHERSBURG, MARYLAND, NOVEMBER 19-20, 1973, DIV. 640, FEB 74, TN-809, 47P

THIS PUBLICATION SUMMARIZES THE PROCEEDINGS OF A CONFERENCE HELD FOR THE PURPOSE OF HIGHLIGHTING THE NEEDS AND PROBLEMS OF FEDERAL, STATE AND LOCAL GOVERNMENT IN SAFEGUARDING INDIVIDUAL PRIVACY AND PROTECTING CONFIDENTIAL DATA CONTAINED IN COMPUTER SYSTEMS FROM LOSS OR MISUSE. THE CONFERENCE WAS HELD AT THE NATIONAL BUREAU OF STANDARDS ON NOVEMBER 19-20, 1973.

THE ORIGIN OF GOVERNMENTAL PROBLEMS IS DISCUSSED IN THE CONTEXT OF THE PUBLIC'S CONCERN FOR PRIVACY ARISING OUT OF COMPUTER-BASED RECORDKEEPING, THE DIVERSE LEGISLATIVE ACTIONS NOW BEING TAKEN TO SAFEGUARD PRIVACY, THE THREATS TO THE SECURITY OF COMPUTER-BASED INFORMATION SYSTEMS AND THE TECHNOLOGICAL PROBLEMS ASSOCIATED WITH PROTECTING AGAINST SUCH THREATS. USEFUL DISTINCTIONS ARE DRAWN BETWEEN PRIVACY, CONFIDENTIALITY AND SECURITY TO CLARIFY THE ISSUES AND ALLOCATE RESPONSIBILITIES FOR SOLVING THE PROBLEM AMONG LAWMAKERS, TECHNOLOGISTS AND MANAGEMENT.

MAJOR NEEDS ARE DESCRIBED. THESE INCLUDE THE NEED FOR COHESIVE FEDERAL, STATE AND LOCAL LEGISLATION, TECHNOLOGICAL GUIDELINES AND STANDARDS FOR ASSURING UNIFORM COMPLIANCE WITH LEGISLATIVE REQUIREMENTS; MANAGEMENT GUIDELINES FOR IDENTIFYING AND EVALUATING THREATS TO SECURITY; AND IMPROVED TECHNOLOGICAL MECHANISMS FOR CONTROLLING ACCESS TO COMPUTER SYSTEMS AND NETWORKS. COST IMPLICATIONS OF PROVIDING SECURITY MEASURES ARE DISCUSSED.

74020003 MARRON, BEATRICE A. S., ELIZABETH FONG, DENNIS W. FIFE, A MECHANIZED INFORMATION SERVICES CATALOG, DIV. 640, FEB 74, TN-814, 56P, 12 REFS

NBS IS MECHANIZING A CATALOG OF CURRENTLY AVAILABLE INFORMATION SOURCES AND SERVICES. INFORMATION FROM RECENT SURVEYS OF MACHINE-READABLE, COMMERCIALLY-AVAILABLE BIBLIOGRAPHIC DATA BASES, AND THE VARIOUS CURRENT AWARENESS, BATCH RETROSPECTIVE, AND INTERACTIVE RETROSPECTIVE SERVICES WHICH CAN ACCESS THEM, HAS BEEN CORRELATED AND CONVERTED INTO A MACHINE-READABLE DATA BASE. A PROTOTYPE SEARCHING CAPABILITY HAS BEEN ESTABLISHED ON AN OPERATIONAL INTERACTIVE RETRIEVAL SYSTEM. REASONS FOR ESTABLISHING THE CATALOG AND THE CHOICE OF THE INITIAL INFORMATION ARE DETAILED AND THE PROTOTYPE IMPLEMENTATION IS DESCRIBED. SAMPLE QUERIES ARE INCLUDED, AS WELL AS A TO-DATE LISTING OF THE CATALOG. PLANS FOR FUTURE DEVELOPMENT ARE DISCUSSED.

74020004 DUNCAN, B. C., D. GARVIN, COMPLETE CLEAR TEXT REPRESENTATION OF SCIENTIFIC DOCUMENTS IN MACHINE-READABLE FORM, DIV. 630, FEB 74, TN-820, 55P, 39 REFS

SCIENCE AND TECHNOLOGY USE A LARGE VARIETY OF SYMBOLS TO REPRESENT PHYSICAL PROPERTIES, CHEMICAL FORMULAS AND MATHEMATICAL EXPRESSIONS.

DATA CENTERS THAT CODIFY AND EVALUATE PHYSICAL PROPERTIES NEED TO USE THIS CONVENTIONAL SYMBOLISM IN THEIR WORK. IT IS RECOMMENDED THAT THESE DATA CENTERS ADOPT THE SYMBOLS AND TERMINOLOGY SPECIFIED BY THE VARIOUS INTERNATIONAL UNIONS BOTH IN MANUAL OPERATIONS AND IN THE CREATION OF MACHINE-READABLE DATA BASES.

IT IS DEMONSTRATED THAT THESE CONVENTIONAL SYMBOLS CAN BE PRODUCED BY MODERN COMMUNICATIONS DEVICES THAT ARE COMPATIBLE WITH THE INTERNATIONAL STANDARD CODES FOR INFORMATION INTERCHANGE. A SET OF CHARACTERS SUITABLE FOR REPRESENTING SCIENTIFIC DATA AND TEXT IS PRESENTED AND PROPOSED AS AN EXTENSION OF THE ISO INFORMATION INTERCHANGE CODE.

THE USE OF THIS EXTENDED CHARACTER CODE BY COMPUTER ORIENTED DATA CENTERS AT THE NATIONAL BUREAU OF STANDARDS IS DESCRIBED. THE EQUIPMENT NEEDED FOR THIS LEVEL OF PERFORMANCE AND CRITERIA FOR THEIR SELECTION ARE OUTLINED.

74020005 SIBLEY, EDGAR H., THE CODASYL DATA BASE APPROACH: A COBOL EXAMPLE AND USE OF A PERSONNEL FILE, DIV. 640, FEB 74, NBSIR 74-500, 78P

THIS REPORT INTRODUCES EXAMPLES OF THE USE OF THE PROPOSED CODASYL DATA DEFINITION LANGUAGE AND DATA BASE LANGUAGE EXTENSIONS TO COBOL. IT DOES THIS BY SUGGESTING THE NEEDS AND DATA BASE ELEMENTS WHICH CAN BE EXPECTED FOR A SET OF SIMPLE PERSONNEL APPLICATIONS. THE DISCUSSION OF THE DATA DEFINITIONS CENTERS AROUND THE DECISIONS THAT THE DATA ADMINISTRATOR MAKES, AND THE TOOLS THAT ARE PROVIDED FOR HIM. THEN IT DISCUSSES A FEW OF THE PROCESSES (PROGRAMS) WHICH ARE REQUIRED BY TYPICAL PERSONNEL DEPARTMENTS, AND SHOWS THEIR IMPLEMENTATION (IN OUTLINE) IN THREE COBOL PROGRAMS. THE READER IS EXPECTED TO HAVE SOME KNOWLEDGE OF THE CODASYL SPECIFICATIONS.

74030001 NEUMANN, ALBRECHT J., A GUIDE TO NETWORKING TERMINOLOGY, DIV. 640, MAR 74, TN-803, 29P

A SELECTED SET OF TERMS AND DEFINITIONS RELATING TO COMPUTER NETWORKING IS PRESENTED IN A COHERENT MANNER. AN INTRODUCTION GIVES THE RATIONALE FOR THE GLOSSARY, DEFINES THE SCOPE BY A BRIEF TUTORIAL OVERVIEW, AND STATES THE GLOSSARY FORMAT AND CONVENTIONS. THE GLOSSARY IS ARRANGED ALPHABETICALLY AND CONTAINS ABOUT 140 DEFINITIONS AND ASSOCIATED TERMS. THE SOURCES OF MANY TERMS ARE CITED AND MODIFIERS INDICATE THE STATUS OF DEFINITIONS. A COMPLETE LISTING OF SOURCE MATERIAL IS APPENDED.

74030002 FIFE, DENNIS W., KIRK RANKIN, ELIZABETH FONG, JUSTIN C. WALKER, BEATRICE A. S. MARRON, A TECHNICAL INDEX OF INTERACTIVE INFORMATION SYSTEMS, DIV. 640, MAR 74, TN-819, 73P, 10 REFS

THIS REPORT CONSTITUTES A REFERENCE TO TECHNICAL FEATURES AND OPERATIONAL STATUS OF INTERACTIVE INFORMATION SYSTEMS, I.E. THOSE PROVIDING A 'CONVERSATIONAL' USAGE MODE TO A 'NON-PROGRAMMER' THROUGH A DATA TERMINAL DEVICE. IT IS AIMED AT THE ADP SERVICE MANAGER, FOR HIS USE IN THE STATE-OF-THE-ART ASSESSMENTS PREPARATORY TO A DETAILED SYSTEM SELECTION PROCESS. IT CONTAINS AN INDEX THAT DESCRIBES 46 SYSTEMS IN TERMS OF A LIST OF OVER 50 TECHNICAL FEATURES PLUS DESCRIPTIVE, IDENTIFICATION, AND BACKGROUND INFORMATION. IN ADDITION, THERE ARE AIDS AND EXAMPLES CONTRIBUTING TO THE INTENDED USE OF

THE INDEX.

74030003 GRAY, MARTHA M., DAVID A. NAGY, ANNOTATED BIBLIOGRAPHY ON TECHNOLOGICAL FORECASTING, DIV. 660, SOCIAL SECURITY ADMINISTRATION, BALTIMORE, MD, MAR 74, NBSIR 74-463, 75P

THIS ANNOTATED BIBLIOGRAPHY OF OVER 100 REFERENCES ON TECHNOLOGICAL FORECASTING IS THE FIRST REPORT PREPARED BY THE NATIONAL BUREAU OF STANDARDS, DEPARTMENT OF COMMERCE, FOR THE SOCIAL SECURITY ADMINISTRATION, DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, UNDER AN INTERAGENCY TECHNICAL SERVICES AGREEMENT FOR ADP BIBLIOGRAPHIC SEARCH AND EVALUATION. THESE REFERENCES WERE SELECTED IN A SURVEY OF THE TECHNICAL LITERATURE, MAINLY FROM THE YEARS 1968-1973, FOR INFORMATION ON TECHNOLOGICAL FORECASTING AS APPLIED TO INFORMATION PROCESSING AND AUTOMATIC DATA PROCESSING.

74040001 COTTON, IRA W., COST-BENEFIT ANALYSIS OF COMPUTER GRAPHICS SYSTEMS, DIV. 650, APR 74, TN-826, 47P, 33 REFS

THIS REPORT ASSESSES THE STATE-OF-THE-ART IN COST BENEFIT ANALYSES OF COMPUTER GRAPHICS SYSTEMS AND SUGGESTS AN APPROACH FOR DEVELOPING IMPROVED METHODOLOGY. COST-BENEFIT ANALYSES ARE DISTINGUISHED FROM ANALYSES OF SYSTEM PERFORMANCE IN THAT THE LATTER ARE DIRECTED AT OPTIMIZING SYSTEM PERFORMANCE AT A GIVEN LEVEL OF INVESTMENT, WHILE THE FORMER ARE DIRECTED AT JUSTIFYING THE INVESTMENT ITSELF.

COMPUTER GRAPHIC SYSTEM DESIGN ALTERNATIVES ARE FIRST OUTLINED. THEN METHODS OF ANALYZING THE PERFORMANCE AND COSTS OF COMPUTER SYSTEMS IN GENERAL AND GRAPHIC SYSTEMS IN PARTICULAR ARE DISCUSSED. WITH THIS INFORMATION IT IS SHOWN HOW COST-EFFECTIVENESS ANALYSES MAY BE PERFORMED. THE NEXT CRUCIAL STEP IS TO CONDUCT BENEFIT ANALYSIS, AN ILL-DEFINED ART. THE RESULTS OF BENEFIT ANALYSIS MUST BE COMBINED WITH COST-EFFECTIVENESS ANALYSIS IN ORDER TO PERFORM THE DESIRED COST-BENEFIT ANALYSIS.

AN EXPERIMENTAL METHODOLOGY IS SUGGESTED FOR BETTER PERFORMING BENEFIT ANALYSES OF COMPUTER GRAPHIC SYSTEMS. A MORE RIGOROUS FORMULATION OF THE COST-BENEFIT PROCEDURE IS THEN OUTLINED. NO ATTEMPT IS MADE IN THIS REPORT TO ACTUALLY PERFORM SUCH AN ANALYSIS.

74040002 MCEWEN, HAZEL E., MANAGEMENT OF DATA ELEMENTS IN INFORMATION PROCESSING (PROCEEDINGS OF THE FIRST NATIONAL SYMPOSIUM, 1974 JANUARY 24 AND 25), DIV. 600, APR 74, NBSIR 74-466, (COM 74-10700), 490P

RECENT TECHNOLOGICAL ADVANCES IN COMPUTERS AND COMMUNICATIONS MAKE POSSIBLE THE INTEGRATION OF DATA SYSTEMS AND THE EXCHANGE OF DATA AMONG THEM ON AN EXPANDING SCALE. HOWEVER, THE FULL EFFECT OF THESE ADVANCES CANNOT BE REALIZED UNLESS THE NEED FOR UNIFORM UNDERSTANDING OF THE COMMON INFORMATION (DATA ELEMENTS) AND THEIR EXPRESSION IN DATA SYSTEMS IS RECOGNIZED AND A MEANS PROVIDED TO EFFECTIVELY MANAGE THIS INFORMATION. THE INCREASING INTERRELATIONSHIPS AMONG THE DATA SYSTEMS OF FEDERAL, STATE, AND LOCAL GOVERNMENTS, AND WITH INDUSTRY AND THE PUBLIC ADD EMPHASIS AND DIMENSION TO THE NEED FOR THE IMPROVED MANAGEMENT OF DATA ELEMENTS INFORMATION PROCESSING.

THESE PROCEEDINGS ARE FOR THE FIRST SYMPOSIUM ON THE MANAGEMENT OF DATA ELEMENTS IN INFORMATION PROCESSING HELD AT THE NATIONAL BUREAU OF STANDARDS ON 1974 JANUARY 24 AND 25. OVER 400 REPRESENTATIVES OF FEDERAL AND STATE GOVERNMENTS, INDUSTRY AND UNIVERSITIES FROM 30 STATES, FROM CANADA, AND SWEDEN WERE IN ATTENDANCE. 34 SPEAKERS DISCUSSED DATA ELEMENT MANAGEMENT IN THE FIELDS OF HEALTH CARE, WATER RESOURCES, STATE GOVERNMENT INFORMATION SYSTEMS, TRANSPORTATION, LIBRARIES, MARKET RESEARCH, MANUFACTURING, BANKING, INFORMATION RETRIEVAL SYSTEMS, MILITARY SYSTEMS, COMPUTER PROGRAMMING AND SOFTWARE SYSTEMS, AND MOTOR VEHICLE REGISTRATION.

74050001 REED, SUSAN K., DENNIS K. BRANSTAD, CONTROLLED ACCESSIBILITY WORKSHOP REPORT, A REPORT OF THE NBS/ACM WORKSHOP ON CONTROLLED ACCESSIBILITY, DIV. 640, MAY 74, TN-827, 86P

A REPORT HAS BEEN PREPARED OF THE NBS/ACM WORKSHOP ON CONTROLLED ACCESSIBILITY, DECEMBER 1972, RANCHO SANTA FE, CALIFORNIA. THE WORKSHOP WAS DIVIDED INTO FIVE SEPARATE WORKING GROUPS: ACCESS CONTROLS, AUDIT, EDP MANAGEMENT CONTROLS, IDENTIFICATION, AND MEASUREMENTS. THE REPORT CONTAINS THE INTRODUCTORY REMARKS OUTLINING THE PURPOSE AND GOALS OF THE WORKSHOP, SUMMARIES OF THE DISCUSSIONS THAT TOOK PLACE IN THE WORKING GROUPS AND THE CONCLUSIONS THAT WERE REACHED. A LIST OF PARTICIPANTS IS INCLUDED.

74060001 FIFE, DENNIS W., RESEARCH CONSIDERATIONS IN COMPUTER NETWORKING TO EXPAND RESOURCE SHARING, DIV. 640, JUN 74, TN-801, 24P, 21 REFS

COMPUTER NETWORKING TECHNOLOGY IS ADEQUATELY DEVELOPED NOW TO SUPPORT RESEARCH AND EXPERIMENTATION TO EXPAND COMPUTING RESOURCE SHARING. WHETHER PROGRESS WILL BE MADE DEPENDS UPON ORGANIZATIONAL INITIATIVE AMONG MULTIPLE INSTITUTIONS, TO POOL PERSONNEL AND CAPITAL SO AS TO EFFECTIVELY ADDRESS THE MAJOR ISSUES IN MANAGEMENT APPROACH, SUPPORT AND SOFTWARE DESIGN THAT LIMIT THE FEASIBLE INTERDEPENDENCE OF COMPUTING OPERATIONS. THE ORGANIZATIONAL REQUIREMENTS ARE PARTIALLY REVEALED BY EXAMINING PROGRESSIVE STAGES OF RESOURCE SHARING IN ORGANIZATIONAL AND OPERATIONAL TERMS RATHER THAN SUCH TECHNICAL ASPECTS AS LOAD SHARING OR PROGRAM SHARING THAT HAVE BEEN INTRODUCED IN THE PAST. FIVE STAGES ARE IDENTIFIED, RANGING FROM SIMPLY ESTABLISHING MULTIPLE SERVICE ACCESS TO THE ADVANCED STAGE WHERE MULTIPLE INSTITUTIONS ORGANIZE FOR JOINT DEVELOPMENT OF NEW RESOURCES. A PRELIMINARY EVALUATION FRAMEWORK FOR NEW MANAGEMENT ARRANGEMENTS RESULTS WHEN THESE STAGES ARE MAPPED AGAINST THE FOUR FUNCTIONAL LEVELS INHERENT IN COMPUTER NETWORK MANAGEMENT. FUTURE NEEDS FOR NETWORKING EXPERIMENTATION AND RESEARCH ARE BRIEFLY DESCRIBED, AND OTHER NBS TECHNICAL RESULTS ARE IDENTIFIED IN CONTEXT.

74060002 JEFFERY, S., INFORMATION HANDLING NEEDS WITHIN THE U.S. PATENT OFFICE, DIV. 640, JUN 74, TN-834, (LC 74-600093), 17P, 12 REFS

THIS PAPER EXAMINES ASPECTS OF THE PATENT OFFICE'S NEEDS THAT MAKE IT DIFFERENT FROM OTHER EXISTING INFORMATION RETRIEVAL SYSTEMS. THE PAPER THEN REVIEWS CURRENT TECHNOLOGY AND ASSESSES ITS ABILITY TO PROVIDE EFFECTIVE AND ECONOMICAL TOOLS TO AID THE PATENT OFFICE.

74060003 MOORE, R. T., BARRIER PENETRATION TESTS, DIV. 650, JUN 74, TN-837, (LC 74-600107), 191P

SIXTEEN STRUCTURAL BARRIER PANELS WERE TESTED TO DETERMINE THEIR RESISTANCE TO FORCIBLE PENETRATION THROUGH THE USE OF READILY AVAILABLE TOOLING. THIRTEEN OF THESE REPRESENTED EXPERIMENTAL TECHNIQUES TO REINFORCE AN EXISTING STRUCTURAL BARRIER OF LOW PENETRATION RESISTANCE; THE OTHER THREE WERE DESIGNS WHICH WOULD BE MOST APPROPRIATE TO CONSIDER AS REPLACEMENT BARRIERS. MINIMUM MAN-PASSABLE SIZED OPENINGS WERE MADE IN THE BARRIERS IN WORKING TIMES WHICH AVERAGED 7.85 MINUTES AND RANGED FROM 1.52 TO 25.56 MINUTES. ONE OF THE REPLACEMENT AND TWO OF THE REINFORCING DESIGNS SHOWED SUPERIOR COST-EFFECTIVENESS.

SEVEN WOVEN, WIRE-MESH SECURITY FENCE SPECIMENS WERE ALSO TESTED FOR THEIR INTRUSION DETERRENCE CAPABILITY. THE TEST RESULTS INDICATE THAT THE DETERRENT INFLUENCE OF UNELECTRIFIED FENCES OF THE TYPE TESTED IS LARGELY PSYCHOLOGICAL RATHER THAN PHYSICAL. ALL OF THE SPECIMENS COULD BE PENETRATED IN 0.14 MINUTES OR LESS.

SAMPLES OF THE ACOUSTICAL AND VIBRATIONAL DATA PRODUCED DURING THE PENETRATION TESTS ADD TO THE GROWING BODY OF DATA WHICH ARE EXPECTED TO BE USEFUL IN THE DESIGN AND SELECTION OF ELECTRONIC INTRUSION ALARM EQUIPMENTS.

74060009 RUTHBERG, ZELLA G., GLORIA R. BOLOTSKY, WILLIAM SLATER, JR., MULTICOMMODITY NETWORK PLOTTING VIA PROGRAM NETPLT, DIV. 640, JUN 74, TN-829, DCA R.O.72-78, 67P

IN THE DESIGN AND OPERATION OF COMPLEX NETWORKS, IT IS OFTEN AN ADVANTAGE TO OBTAIN A VISUAL REPRESENTATION THAT READILY ALLOWS FOR A QUICK APPRAISAL OF THE NETWORK'S CURRENT CONFIGURATION OR OF ITS CHANGED APPEARANCE DUE TO VARIATIONS OF ITS NODES AND LINKS. THE PROGRAM NETPLT ENABLES A USER TO PLOT THE TWO LEADING CHARACERTISTICS OF ANY MULTICOMMODITY NETWORK: (1) NODES AND LINKS AND (2) THE MULTIPLE SOURCE-SINK STRUCTURE (MULTICOMMODITY PROPERTY). THE UNIQUE FEATURE OF NETPLT IS ITS UNAMBIGUOUS PLANAR REPRESENTATION OF LINKS. NETPLT USES AN ARC OF A CIRCLE INSTEAD OF THE USUAL STRAIGHT LINE, TO REPRESENT A CONNECTOR BETWEEN A NODE PAIR (LINK).

74062001 MCADAMS, ALAN K., MADELINE M. HENDERSON, REPORT OF CONFERENCE ON MAKING THE SERVICE INDUSTRIES MORE PRODUCTIVE THROUGH COMPUTERS AND AUTOMATION, DIV. 600, JUN 74, NBSIR 74-515, 195P

THE ENGINEERING FOUNDATION AND THE NATIONAL BUREAU OF STANDARDS, INSTITUTE FOR COMPUTER SCIENCES AND TECHNOLOGY.

CO-SPONSORED THIS CONFERENCE TO BRING TOGETHER PERSONS ACTIVELY CONCERNED WITH THE SUBJECT TO IDENTIFY GAPS IN KNOWLEDGE, NEEDS AND OPPORTUNITIES IN THE AREA, AND TO POINT UP GOVERNMENTAL GOALS AND PROGRAMS TO RESPOND TO SUCH NEEDS. THIS REPORT CONTAINS PRINCIPAL PRESENTATIONS AND THE TEXTS OF WORKSHOP PANEL REPORTS PREPARED DURING THE CONFERENCE.

74080001 NEUMANN, ALBRECHT J., BRIAN G. LUCAS, JUSTIN C. WALKER, DENNIS W. FIFE, A TECHNICAL GUIDE TO COMPUTER-COMMUNICATIONS INTERFACE STANDARDS, DIV. 640, AUG 74, TN-843, (LC 74-600131), 111P

A TECHNICAL SUMMARY AND GUIDE IS GIVEN FOR EXISTING AND FORTHCOMING FEDERAL AND NATIONAL STANDARDS ON DATA COMMUNICATIONS PERTINENT TO COMPUTER NETWORKING. SELECTED INTERNATIONAL STANDARDS AND INDUSTRY PRACTICES ARE INCLUDED FOR COMPLETENESS. PREPARED TO ASSIST THE APPLICATION OF STANDARDS WITHIN THE WORLD WORLD WIDE MILITARY COMMAND AND CONTROL SYSTEM, THIS HANDBOOK SHOULD BE USEFUL TO ALL ADP SYSTEM DESIGNERS INTERESTED IN UNIFORM DATA TERMINAL INTERFACES, CHARACTER SETS AND CODES, KEYBOARD ARRRANGEMENTS, AND COMMUNICATIONS LINE DISCIPLINES FOR EFFECTIVE MESSAGE EXCHANGE BETWEEN COMPUTERS.

74080002 STEWART, S. L., CONCEPTS IN QUALITY SOFTWARE DESIGN, DIV. 640, AUG 74, TN-842, (LC 74-600130), 89P, 30 REFS

A SEMINAR SERIES ON QUALITY SOFTWARE, SPONSORED BY THE SYSTEMS AND SOFTWARE DIVISION, WAS HELD AT THE NATIONAL BUREAU OF STANDARDS DURING THE SUMMER OF 1972. THIS NOTE INCLUDES FIVE OF THESE SEMINARS IN EDITED FORM. (I) A BRIEF BACKGROUND PROVIDES MOTIVATION FOR STUDIES IN SOFTWARE QUALITY. THE AUTHOR MENTIONS SOME FACTORS WHICH INFLUENCE SOFTWARE MANUFACTURE, AND PROPOSE MEASURES WHICH MIGHT QUANTIFY CONCEPTS OF 'SOFTWARE QUALITY'. SEVERAL APPROACHES TO ESTABLISHING PROGRAM CORRECTNESS RECEIVE ATTENTION. (II) ELEMENTS OF TOP-DOWN PROGRAMMING ARE SKETCHED OUT AND THEN EXAMINED IN DETAIL. AN EXTENDED CRITIQUE OF ANOTHER TOP-DOWN EXPERIMENT PROVIDES EXAMPLE MATERIAL. (III) POWERS OF VARIOUS STRUCTURED CONTROL CONSTRUCTS ARE COMPARED WITHIN A FRAMEWORK OF WEAK AND STRONG PROGRAM EQUIVALENCE. RESULTS INCLUDE A DEMONSTRATION THAT DIJKSTRA'S D-PROGRAMS ARE STRONGLY EQUIVALENT TO PROGRAMS BUILT FROM FUNCTIONS AND ONE-INPUT/TWO-OUTPUT PREDICATES. (IV) AFTER A REVIEW OF QUINE'S NOTION OF REFERENTIAL TRANSPARENCY, THE AUTHOR EXAMINES ELEMENTS OF GOOD AND BAD PROGRAMMING PRACTICE. IN ADDITION, A TABLE OF PROGRAMMING PROVERBS PROVIDES GUIDANCE TO A PROGRAMMER, AND SHOULD BE ESPECIALLY USEFUL TO A NOVICE. (V) DISCUSSIONS ON PROBLEM AND PROGRAM SPECIFICATION PROVIDE AN INTRODUCTION TO A REVIEW OF PROOF-OF-CORRECTNESS TECHNIQUES. THEN, NOTING SOME PRACTICAL LIMITATIONS ON PROVING CORRECTNESS, THE AUTHOR GOES ON TO EXAMINE SELECTED FACETS OF PROGRAM SYNTHESIS.

74083001 FIFE, DENNIS W., STANDARDS ANALYSIS FOR FUTURE WWMCCS COMPUTER NETWORKING, DIV. 640, 30 AUG 74, NBSIR 74-570, 107P

THE WORLD-WIDE MILITARY COMMAND AND CONTROL SYSTEM (WWMCCS) COMPRISES OVER 30 COMPUTER INSTALLATIONS, EVOLVING TOWARD HEAVY DEPENDENCE ON TERMINAL-TO-COMPUTER AND COMPUTER-TO-COMPUTER COMMUNICATIONS IN SERVING INDIVIDUAL BASES, COMMANDS, AND NATIONAL MILITARY AUTHORITIES. ALTHOUGH A HIGHLY STANDARDIZED SYSTEM HAS EMERGED THROUGH IDENTICAL MAINFRAMES, HARDWARE DEVICES, AND BASIC SOFTWARE, THE HARDWARE/SOFTWARE CONFIGURATION OF INDIVIDUAL INSTALLATIONS ARE NOT IDENTICAL AND SIGNIFICANT EVOLUTIONARY CHANGES ARE OCCURING IN HARDWARE/SOFTWARE COMPONENTS, INTERFACES, AND CONFIGURATION RULES. IT IS VITAL THEREFORE TO DELIBERATELY ADOPT SELECTED INTERFACE SPECIFICATIONS AS STANDARDS THAT TRANSCEND THE PRESENT COMPUTER HARDWARE AND SOFTWARE, AND THAT WILL GUIDE NEAR-TERM RECONFIGURATION OR REDESIGN AS WELL AS ULTIMATE, PROGRESSIVE REPLACEMENT OF THE WWMCCS COMPUTER NETWORK SYSTEM. A PREVIOUS NBS REPORT, TECHNICAL NOTE 843, PROVIDED A SUCCINCT HANDBOOK ON EXISTING COMPUTER-COMMUNICATIONS STANDARDS WITH WIDESPREAD APPLICABILITY.

THIS REPORT ADDRESSES ISSUES AND METHODS IN INTERFACE STANDARDS ANALYSIS, TO IDENTIFY AND PARTIALLY EVALUATE COMPUTER-COMMUNICATIONS TECHNIQUES THAT WOULD CONTRIBUTE TO ENHANCING WWMCCS INTEROPERABILITY. THESE ISSUES INCLUDE: FUNCTIONAL DECOMPOSITION OF COMPUTER-COMMUNICATIONS PROCESSES; COMPLEXITY AND PERFORMANCE ANALYSIS OF ADVANCED DATA LINK CONTROL TECHNIQUES; FEASIBILITY OF COMMON COMMUNICATIONS FRONT-END SOFTWARE; AND REQUIREMENTS FOR USER-ORIENTED NETWORK PROTOCOLS. THE PRESENTATION INDICATES THE STANDARD 'DISCIPLINE' INVOLVED IN THE EVALUATION AND IMPLEMENTATION OF EFFECTIVE STANDARDS FOR A COMPLEX COMPUTER NETWORK ENVIRONMENT.

74090001 BLANC, ROBERT P., COST ANALYSIS FOR COMPUTER COMMUNICATIONS, DIV. 650, SEP 74, TN-845, 40P

THIS REPORT SUMARIZES A COMMUNICATION COST STUDY RELEVANT TO THE NEEDS OF THE NSF NETWORKING FOR SCIENCE PROGRAM. THE PRIMARY PURPOSE OF THIS REPORT IS TO PROVIDE AN APPROXIMATION TO THE COMMUNICATIONS COSTS OF CONNECTING A SPECIFIED NUMBER OF HOST COMPUTERS IN SELECTED LOCATIONS WITH A SPECIFIED NUMBER OF INTERACTIVE USER TERMINALS. COST FACTORS FROM EXISTING, PROPOSED, AND MODELED VALUE-ADDED NETWORKS ARE APPLIED TO HYPOTHETICAL TRAFFIC DEMANDS TO ARRIVE AT COST ESTIMATES.

74090002 RENNINGER, CLARK R.. APPROACHES TO PRIVACY AND SECURITY IN COMPUTER SYSTEMS, DIV. 600. SEP 74, NBS-SP-404. 84P

THIS PUBLICATION SUMMARIZES AND CONTAINS THE PROCEEDINGS OF A CONFERENCE HELD AT THE NATIONAL BUREAU OF STANDARDS ON MARCH 4-5, 1974 TO CONTINUE THE DIALOG IN SEARCH OF WAYS TO PROTECT CONFIDENTIAL INFORMATION IN COMPUTER SYSTEMS. PROPOSALS ARE PRESENTED FOR MEETING GOVERNMENTAL NEEDS IN SAFEGUARDING INDIVIDUAL PRIVACY AND DATA CONFIDENTIALITY THAT WERE IDENTIFIED AT A CONFERENCE HELD IN NOVEMBER 1973. AMONG THE PROPOSALS ARE THE ENACTMENT OF PRIVACY LEGISLATION, IMPROVED COMPUTER SYSTEM ARCHITECTURE AND ACCESS CONTROLS, INFORMATION AND SECURITY MANAGEMENT GUIDELINES AND THE DEVELOPMENT OF A SYSTEMATIC. BALANCED APPROACH TO SYSTEM SECURITY. THE PROPOSALS WERE PRESENTED BY LEGISLATORS, CITIZENS, COMPUTER INDUSTRY ASSOCIATIONS AND COMPANIES, PROFESSIONAL SOCIETIES, AND PUBLIC INTEREST GROUPS.

74090009 HIGHLAND, HAROLD JOSEPH, DR.. COMPUTER PERFORMANCE EVALUATION. DIV. 640. SEP 74. NBS-SP-401, (LC 74-13113), 155P

THE EIGHTH MEETING ON THE COMPUTER PERFORMANCE EVALUATION USERS GROUP (CPEUG), SPONSORED BY THE UNITED STATES ARMY COMPUTER SYSTEMS COMMAND AND THE NATIONAL BUREAU OF STANDARDS, WAS HELD DECEMBER 4-7, 1973 AT NBS, GAITHERSBURG. THE PROGRAM CHAIRMAN FOR THIS MEETING WAS MERTON J. BATCHELDER OF THE US ARMY COMPUTER SYSTEMS COMMAND AT FORT BELVOIR VA 22060 ?CSCS-ATA STOP H-141.

ABOUT 150 ATTENDEES AT THIS MEETING HEARD THE 17 PAPERS PRESENTED ON COMPUTER PERFORMANCE, EVALUATION AND MEASUREMENT. AMONG THE PAPERS PRESENTED WERE THOSE DEALING WITH HARDWARE AND SOFTWARE MONITORS, WORKLOAD DEFINITION AND BENCHMARKING. A REPORT OF FIPS TASK FORCE 13. COMPUTER SCHEDULING AND EVALUATION IN TIME-SHARING AS WELL AS MVT ENVIRONMENT. HUMAN FACTORS IN PERFORMANCE ANALYSIS. DOLLAR EFFECTIVENESS IN EVALUATION, SIMULATION TECHNIQUES IN HARDWARE ALLOCATION, A FEDSIM STATUS REPORT AS WELL AS OTHER RELATED TOPICS. THESE PROCEEDINGS REPRESENT A MAJOR SOURCE IN THE LIMITED LITERATIRE ON COMPUTER PERFORMANCE, EVALUATION AND MEASUREMENT.

74091701 SHUPE, PHILIP D., JR., PAUL MEISSNER, JAMES R. PARK, REMITTANCE PROCESSING SYSTEM. VOLUME I, DIV. 650. 17 SEP 74. NBSIR 74-S77-1, IRS 72-487, IRS 73-558, IRS 74-1013, 194P

THE REMITTANCE PROCESSING SYSTEM IS A PROTOTYPE DEVELOPED FOR THE INTERNAL REVENUE SERVICE TO TEST A NEW CONCEPT IN AUTOMATING THE PROCESSING OF TAXPAYER REMITTANCES. CENTRAL TO THE NEW PROCESSING CONCEPT WAS THE INTEGRATION OF THE DIRECT DATA ENTRY SYSTEM. INITIAL ENTRY STATION WITH EQUIPMENT COMPONENTS THAT WOULD ELIMINATE A NUMBER OF INDIVIDUAL MANUAL OPERATIONS. PERMIT OPERATOR INTERFACE WITH THE CENTRAL DDES COMPUTER, AND PROVIDE FOR VERIFICATION OF INITIAL ENTRY. CHECK ENDORSEMENT. AUDIT TRAIL DATA, REMITTANCE DOCUMENTATION, AND AFFIXING INFORMATION TO TAXPAYER DOCUMENTATION ACCOMPANYING THE REMITTANCE. THIS REPORT DESCRIBES THE EQUIPMENT WHICH WAS CONFIGURED TO IMPLEMENT THESE PROCESSES AND TO DEMONSTRATE THE VIABILITY OF THE CONCEPT.

74091702 SHUPE, PHILIP D., JR., PAUL MEISSNER, JAMES R. PARK, REMITTANCE PROCESSING SYSTEM. VOLUME II (REFERENCE VOLUME I), DIV. 650. SEP 74. NBSIR 74-S77-2. 318P

THIS REPORT DESCRIBES THE EQUIPMENT WHICH WAS CONFIGURED TO IMPLEMENT THESE PROCESSES AND TO DEMONSTRATE THE VIABILITY OF THE CONCEPT.

74100001 HOLBERTON, FRANCES E., ELIZABETH G. PARKER, NBS FORTRAN TEST PROGRAMS. VOLUME I - DOCUMENTATION FOR VERSIONS I AND 3, DIV. 640. OCT 74, NBS-SP-399 VOL. I. (LC 74-12314). 171P

THE NBS FORTRAN TEST PROGRAMS, WRITTEN IN STANDARD FORTRAN, ARE DESIGNED TO TEST WHETHER A FORTRAN COMPILER ACCEPTS THE

FORMS AND INTERPRETATIONS OF THE FORTRAN LANGUAGE AS DESCRIBED IN THE AMERICAN NATIONAL STANDARD FORTRAN DOCUMENT X3.9-1966. THE TEST PROGRAMS, COMPRISED OF 116 TEST UNITS, ARE STRUCTURED INTO TWO VERSIONS, EACH CONTAINING APPROXIMATELY 14,500 PUNCH CARD IMAGES. THE TEST UNITS MAY BE USED AS SEPARATE EXECUTABLE FORTRAN PROGRAMS, OR MAY BE LINKED END TO END WITH OTHER TEST UNITS, WITH A MINIMUM OF USER EFFORT, TO IMPROVE OPERATING EFFICIENCY. VERSION 1 IS STRUCTURED INTO 116 EXECUTABLE FORTRAN PROGRAMS, AND VERSION 3, CONTAINING THE SAME 116 TEST UNITS, IS STRUCTURED INTO 14 EXECUTABLE FORTRAN PROGRAMS FOR USE ON LARGE FORTRAN PROCESSORS.

THE TEST PROGRAM DESIGN CRITERIA WAS TO: CONSTRAIN ALL TEST PROGRAMS TO THE FORTRAN STANDARD X3.9-1966, REDUCE THE EFFECTS OF THOSE AREAS IN WHICH THE FORTRAN STANDARD DOES NOT PRESCRIBE A METHOD OR SOLUTION, E.G., RANGE, PRECISION, SIZE OF COMPUTER, ETC., SIMPLIFY THE USE OF THE FORTRAN TEST PROGRAMS, TEST FORTRAN LANGUAGE ELEMENTS BEFORE THEY ARE USED IN SUPPORT OF OTHER TESTS, MAINTAIN AN OPEN ENDED SYSTEM SO THAT TESTS MAY BE CHANGED OR ADDED. THE TEST PROGRAMS REQUIRE THE USE OF A CARD READER, PRINTER AND ONE INTERMEDIATE TAPE UNIT.

74IC0002 HOLBERTON, FRANCES E., ELIZABETH G. PARKER, NBS FORTRAN TEST PROGRAMS. VOLUME 2 - LISTINGS FOR VERSION 1, DIV. 640, OCT 74, NBS-SP-399 VOL. 2, (LC 74-12314), 221P

THE NBS FORTRAN TEST PROGRAMS, WRITTEN IN STANDARD FORTRAN, ARE DESIGNED TO TEST WHETHER A FORTRAN COMPILER ACCEPTS THE FORMS AND INTERPRETATIONS OF THE FORTRAN LANGUAGE AS DESCRIBED IN THE AMERICAN NATIONAL STANDARD FORTRAN DOCUMENT X3.9-1966. THE TEST PROGRAMS, COMPRISED OF 116 TEST UNITS, ARE STRUCTURED INTO TWO VERSIONS, EACH CONTAINING APPROXIMATELY 14,500 PUNCH CARD IMAGES. THE TEST UNITS MAY BE USED AS SEPARATE EXECUTABLE FORTRAN PROGRAMS, OR MAY BE LINKED END TO END WITH OTHER TEST UNITS, WITH A MINIMUM OF USER EFFORT, TO IMPROVE OPERATING EFFICIENCY. VERSION 1 IS STRUCTURED INTO 116 EXECUTABLE FORTRAN PROGRAMS, AND VERSION 3, CONTAINING THE SAME 116 TEST UNITS, IS STRUCTURED INTO 14 EXECUTABLE FORTRAN PROGRAMS FOR USE ON LARGE FORTRAN PROCESSORS.

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74IC0003 HOLBERTON, FRANCES E., ELIZABETH G. PARKER, NBS FORTRAN TEST PROGRAMS. VOLUME 3 - LISTINGS FOR VERSION 3, DIV. 640, OCT 74, NBS-SP-399 VOL. 3, (LC 74-12314), 221P

THE NBS FORTRAN TEST PROGRAMS, WRITTEN IN STANDARD FORTRAN, ARE DESIGNED TO TEST WHETHER A FORTRAN COMPILER ACCEPTS THE FORMS AND INTERPRETATIONS OF THE FORTRAN LANGUAGE AS DESCRIBED IN THE AMERICAN NATIONAL STANDARD FORTRAN DOCUMENT X3.9-1966. THE TEST PROGRAMS, COMPRISED OF 116 TEST UNITS, ARE STRUCTURED INTO TWO VERSIONS, EACH CONTAINING APPROXIMATELY 14,500 PUNCH CARD IMAGES. THE TEST UNITS MAY BE USED AS SEPARATE EXECUTABLE FORTRAN PROGRAMS, OR MAY BE LINKED END TO END WITH OTHER TEST UNITS, WITH A MINIMUM OF USER EFFORT, TO IMPROVE OPERATING EFFICIENCY. VERSION 1 IS STRUCTURED INTO 116 EXECUTABLE FORTRAN PROGRAMS, AND VERSION 3, CONTAINING THE SAME 116 TEST UNITS, IS STRUCTURED INTO 14 EXECUTABLE FORTRAN PROGRAMS FOR USE ON LARGE FORTRAN PROCESSORS.

THE TEST PROGRAM DESIGN CRITERIA WAS TO: CONSTRAIN ALL TEST PROGRAMS TO THE FORTRAN STANDARD X3.9-1966, REDUCE THE EFFECTS OF THOSE AREAS IN WHICH THE FORTRAN STANDARD DOES NOT PRESCRIBE A METHOD OR SOLUTION, E.G., RANGE, PRECISION, SIZE OF COMPUTER, ETC., SIMPLIFY THE USE OF THE FORTRAN TEST PROGRAMS, TEST FORTRAN LANGUAGE ELEMENTS BEFORE THEY ARE USED IN SUPPORT OF OTHER TESTS, MAINTAIN AN OPEN ENDED SYSTEM SO THAT TESTS MAY BE CHANGED OR ADDED. THE TEST PROGRAMS REQUIRE THE USE OF A CARD READER, PRINTER AND ONE INTERMEDIATE TAPE UNIT.

74IC0007 LYON, GORDON, RONA B. STILLMAN, A FORTRAN ANALYZER, DIV. 640, OCT 74, TN-849, AG-350, (LC 74-600144), 28P

DETAILS OF A FORTRAN ANALYSIS PACKAGE ARE PRESENTED. EXAMPLES ILLUSTRATE A CURRENT OPERATIONAL LEVEL WHICH GATHERS FORTRAN STATEMENT AND FREQUENCY-OF-EXECUTION STATISTICS. ARGUMENTS SUPPORT A SIMPLE TECHNIQUE FOR MONITORING FORTRAN EXECUTIONS.

74100008 KUCK, DAVID J., COMPUTER SYSTEM CAPACITY FUNDAMENTALS, DIV. 640, OCT 74. TN-851, (LC 74-600148), 20P

A FRAMEWORK FOR THE STUDY OF COMPUTER CAPACITY IS GIVEN BY MEANS OF A DEFINITION OF CAPACITY IN TERMS OF SPEEDS OF VARIOUS PARTS OF A COMPUTER AS WELL AS MEMORY SIZE. THE CALCULATION OF THEORETICAL CAPACITY IS GIVEN FOR SEVERAL COMBINATIONS OF PROCESSOR, MEMORY, AND I/O BANDWITH FOR BOTH OVERLAPPED AND NONOVERLAPPED MACHINES. THE TRADEOFF BETWEEN PRIMARY MEMORY SIZE AND I/O BANDWITH IS DISCUSSED IN TERMS OF THE NEW DEFINITION.

74110001 WALKOWICZ, JOSEPHINE L., BENCHMARKING AND WORKLOAD DEFINITION: A SELECTED BIBLIOGRAPHY WITH ABSTRACTS, DIV. 640, NOV 74. NBS-SP-405, 45P

THESE 85 CITATIONS TO THE LITERATURE OF BENCHMARKING AND WORKLOAD DEFINITION WERE SELECTED FROM A LONGER LIST OF DOCUMENTS, ENCOMPASSING A SOMEWHAT BROADER SCOPE, THAT WAS SUBMITTED TO FEDERAL INFORMATION PROCESSING STANDARDS (FIPS) TASK GROUP 13 IN RESPONSE TO A REQUEST MADE TO ATTENDEES OF THE TASK GROUP'S PLANNING SESSION HELD ON JULY 12, 1973. AT THE NATIONAL BUREAU OF STANDARDS. ONE OF THE TOPICS DISCUSSED AT THE PLANNING SESSION WAS THE COLLECTION OF A SELECTED BIBLIOGRAPHY ON WORKLOAD DEFINITION AND BENCHMARKING. THE BIBLIOGRAPHIC EFFORT WAS TO BE DIRECTED NOT SO MUCH TOWARD EXHAUSTIVENESS AS TOWARD THE DEVELOPMENT OF A BIBLIOGRAHPY THAT THE ATTENDEES HAD FOUND USEFUL AND WOULD, THEREFORE, RECOMMEND TO OTHER WORKERS IN THE FIELD. OF THE APPROXIMATELY 250 CITATIONS SUBMITTED TO THE TASK GROUP, THESE 85 WERE SELECTED ON THE BASIS OF TWO CRITERIA: (1) THE ITEM DEALT PRIMARILY WITH BENCHMARKING OR WORKLOAD DEFINITION; AND (2) HARD COPY WAS AVAILABLE AT THE INSTITUTE FOR COMPUTER SCIENCES AND TECHNOLOGY. THE CITATIONS ARE ARRANGED ALPHABETICALLY BY LAST NAMES OF THE FIRST AUTHORS. EACH CITATION HAS AN ABSTRACT, A CLASSIFICATION CATEGORY ASSIGNMENT, AND A LIST OF KEYWORDS. THE CATEGORY ASSIGNMENTS ARE MADE FROM A CLASSIFICATION SCHEME THAT WAS DEVELOPED FOR THE COLLECTION AND THAT IS USED HERE AS A CATEGORY INDEX TO THE BIBLIOGRAPHY. A KEYWORD INDEX IS ALSO PROVIDED.

74121201 MOORE, R. T., THE INFLUENCE OF INK ON THE QUALITY OF FINGERPRINT IMPRESSIONS, DIV. 650, 12 DEC 74. NBSIR 74-627, FBI 34579, 15P

TESTS WERE CONDUCTED ON SEVERAL TYPES OF INK TO DETERMINE THEIR INFLUENCE ON THE QUALITY OF FINGERPRINT IMPRESSIONS WHICH THEY COULD PRODUCE. THE THICKNESS AND UNIFORMITY OF THE FILM USED TO INK THE FINGERS WERE FOUND TO BE THE MOST SIGNIFICANT FACTOR IN PROVIDING HIGH QUALITY IMPRESSIONS. A METHOD IS DESCRIBED FOR METERING OUT PRINTER'S INK AND ESTIMATING WHETHER OR NOT A UNIFORM FILM OF NEAR OPTIMUM THICKNESS HAS BEEN ROLLED OUT ON A GLASS INKING PLATE.

75030001 SALTMAN, ROY G., EFFECTIVE USE OF COMPUTING TECHNOLOGY IN VOTE-TALLYING, DIV. 660, MAR 75, NBSIR 75-687, (COM-75-11137), 131P, 147 REFS

THE RESULTS OF A SYSTEM ANALYSIS AND EVALUATION CONDUCTED ON THE ROLE OF AUTOMATIC DIGITAL PROCESSING IN VOTE-TALLYING ARE PRESENTED. INCLUDED IN THE REPORT ARE DESCRIPTIONS OF HARDWARE, SOFTWARE, AND ADMINISTRATIVE PROBLEMS ENCOUNTERED IN FOURTEEN ELECTIONS IN WHICH ELECTRONIC COMPUTING TECHNOLOGY WAS UTILIZED.

METHODS OF ASSURING MORE CONFIDENCE IN THE ACCURACY AND SECURITY OF THE VOTE-TALLYING PROCESS ARE PRESENTED AND DESCRIBED. THESE METHODS INCLUDE AIDS TO AUDITS OF CALCULATIONS, PHYSICAL CONTROLS OVER BALLOTS AND COMPUTER RECORDS, AND GUIDELINES FOR THE USE OF COMPUTER PROGRAMS, COMPUTER FACILITIES, AND TELEPROCESSING. METHODS OF IMPROVING THE ELECTION PREPARATION PROCESS ALSO ARE PRESENTED AND DESCRIBED. THESE INVOLVE THE DEVELOPMENT AND IMPLEMENTATION OF DESIGN SPECIFICATIONS AND ACCEPTANCE TESTS FOR COMPUTER PROGRAMS, ELECTION EQUIPMENT AND SUPPLIES, AND GUIDELINES FOR PRE-ELECTION CHECKOUT OF VOTE-TALLYING SYSTEMS AND FOR ASSURANCE OF MANAGEMENT CONTROL.

INSTITUTIONAL FACTORS ARE DISCUSSED WHICH SHOULD BE CONSIDERED IF IMPROVED ACCURACY AND SECURITY CONTROLS AND MORE EFFECTIVE ELECTION PREPARATIONS ARE TO BE IMPLEMENTED. RECOMMENDATIONS FOR ADDITIONAL RESEARCH AND OTHER ACTIVITIES INCLUDING A POSSIBLE FEDERAL ROLE ARE PROVIDED.

75040001 DEI ROSSI, JAMES A., COST RECOVERY IN PRICING AND CAPACITY DECISIONS FOR AUTOMATED INFORMATION SYSTEMS, DIV. 660, APR 75, TN-864, (LC 75-600(15), 60P, 28 REFS

THIS PAPER EXAMINES THE COST-BENEFIT IMPLICATIONS OF ALTERNATIVE PRICING AND CAPACITY INVESTMENT DECISIONS FOR

AUTOMATED SCIENTIFIC AND TECHNICAL INFORMATION RETRIEVAL SYSTEMS. TWO TYPICAL SYSTEMS ARE EXAMINED AND NUMERICAL EXAMPLES PRESENTED. IN THE FIRST SYSTEM, SEARCH REQUESTS ARE ENTERED ON-SITE. THE NUMERICAL EXAMPLES SHOW HOW SETTING PRICE TO MAXIMIZE NET SOCIAL BENEFIT PRECLUDES TOTAL COST RECOVERY AND IMPLIES SUBSIDIZATION. IN THE SECOND HYPOTHETICAL SYSTEM, SEARCH REQUESTS ARE ENTERED FROM REMOTE ACCESS TERMINALS. ALLOWANCE IS MADE FOR RANDOM ARRIVAL RATES, AND DISTINCTION IS MADE BETWEEN SYSTEM CHARGES TO USERS AND OTHER USER INCURRED COSTS. WITH THESE REFINEMENTS, THE NUMERICAL EXAMPLES SHOW HOW, FOR CERTAIN RANGES OF OUTPUT, TOTAL COST RECOVERY IS CONSISTENT WITH THE MAXIMIZATION OF NET SOCIAL BENEFIT. THE PAPER THEN EXAMINES THE 'PUBLIC GOOD' ATTRIBUTES OF SCIENTIFIC AND TECHNICAL INFORMATION RETRIEVAL SYSTEMS AND CONCLUDES THAT SUCH SYSTEMS CAN BE REVIEWED AS 'SEMI-PUBLIC GOODS' SINCE THE INFORMATION STORED HAS THE CHARACTERISTIC OF A PUBLIC GOOD WHILE ACCESS TO THIS INFORMATION HAS THE CHARACTERISTIC OF A PRIVATE GOOD. BASED ON THE PUBLIC GOOD CONSIDERATIONS AND THE NUMERICAL EXAMPLES, THE PAPER CONCLUDES THAT SUBSIDIZATION FOR THE FIXED COSTS IS WARRANTED TO THE EXTENT THAT ALL REASONABLE ALTERNATIVES WHICH MAXIMIZE NET SOCIAL BENEFIT PRECLUDE TOTAL COST RECOVERY.

75070001 ANDERSON, RUTH K., JOSEPH O. HARRISON, COMPUTER PROGRAM PACKAGE FOR METRIC CONVERSION: REFERENCE MANUAL, DIV. 600, JUL 75, TN-872, (LC 75-600045, SD C13.46:872), 145P

THE PROGRAMS IN THIS PACKAGE ARE DESIGNED TO CONVERT DIMENSIONS AND OTHER QUANTITIES APPEARING ON ENGINEERING DRAWINGS FROM METRIC TO U.S. CUSTOMARY UNITS AND VICE VERSA. THEY WERE DEVELOPED BY CATERPILLAR TRACTOR CO. AND GENERAL MOTORS CORPORATION. IN ADDITION TO THE PROGRAMS THEMSELVES, THE PACKAGE CONTAINS DOCUMENTATION EXPLAINING HOW TO GET THE PROGRAMS RUNNING ON DIFFERENT COMPUTERS AND HOW TO USE THEM, AND TEST PROBLEMS TO PERMIT USERS TO VERIFY THAT THE PROGRAMS RUN CORRECTLY ON THEIR OWN COMPUTERS. THE CATERPILLAR PROGRAM CONVERTS 31 DIFFERENT METRIC UNITS TO THEIR U.S. CUSTOMARY EQUIVALENTS. IN CONTRAST, THE GENERAL MOTORS PROGRAMS CONVERT IN BOTH DIRECTIONS BUT WORK WITH MILLIMETRES AND INCHES ONLY. THE GENERAL MOTORS PROGRAMS ALSO USE ROUNDING CONVENTIONS DIFFERING SOMEWHAT FROM THOSE EMPLOYED IN THE CATERPILLAR PROGRAM. BOTH THE CATERPILLAR AND THE GENERAL MOTORS PROGRAMS ARE WRITTEN IN AMERICAN NATIONAL STANDARD FORTRAN AND ARE SUITABLE FOR USE ON A WIDE RANGE OF COMPUTERS WITH LITTLE OR NO MODIFICATION. THE CATERPILLAR PROGRAM IS OPERATED IN BATCH MODE WHILE THE GENERAL MOTORS PROGRAMS ARE INTERACTIVE.

75070002 STILLMAN, RONA B., DR., BELKIS LEONG-HONG, SOFTWARE TESTING FOR NETWORK SERVICES, DIV. 640, JUL 75, TN-874, NSF AG-350, (LC 75-600046, SD C13.46:874), 40P, 9 REFS

THIS REPORT IS A FIRST TOWARD IDENTIFYING EFFECTIVE SOFTWARE TEST AND MEASUREMENT TOOLS, AND DEVELOPING A GUIDE FOR THEIR USAGE NETWORK-WIDE. THE UTILITY OF TWO TOOLS, THE NBS FORTRAN TEST ROUTINES AND THEIR NBS ANALYZER, IS STUDIED EXPERIMENTALLY, AND INDICATIONS OF THEIR ROLE IN SYSTEMATIC TESTING IN A NETWORKING ENVIRONMENT ARE GIVEN.

75070003 NEUMANN, ALBRECHT J., A BASIS FOR STANDARDIZATION OF USER-TERMINAL PROTOCOLS FOR COMPUTER NETWORK ACCESS, DIV. 640, JUL 75, TN-877, NSF CA-68, (LC 75-600052, SD C13.46:877), 29P, 5 REFS

A USER-TERMINAL PROTOCOL IS DEFINED WHICH ENABLES A USER AT A TERMINAL TO ACCESS COMPUTERIZED INFORMATION SYSTEMS. THE BASIC FUNCTIONS SUCH AS IDENTIFICATION, AUTHORIZATION, AND VALIDATION ARE OUTLINED AND VARIOUS SIGNALS AND MESSAGES MAKING UP THE PROTOCOL ARE IDENTIFIED. THE PURPOSE OF THE PAPER IS TO ESTABLISH A BASIS FOR STANDARDIZATION AND DEVELOPMENT OF A UNIFIED USER PROTOCOL.

75070004 WEGSTEIN, J. H., THE M40 FINGERPRINT MATCHER, DIV. 600, JUL 75, TN-878, (SD C13.46:878), 14P

A PROCEDURE IS DESCRIBED FOR AUTOMATICALLY DETERMINING WHETHER TWO FINGERPRINT IMPRESSIONS WERE MADE BY THE SAME FINGER. THE PROCEDURE USES THE X AND Y COORDINATES AND THE INDIVIDUAL DIRECTIONS OF THE MINUTIAE (RIDGE ENDINGS AND BIFURCATIONS). THE IDENTITY OF THE TWO IMPRESSIONS IS ESTABLISHED BY COMPUTING THE DENSITY OF CLUSTERS OF POINTS IN DELTA X, DELTA Y SPACE WHERE DELTA X AND DELTA Y ARE THE DIFFERENCES IN COORDINATES THAT ARE FOUND IN GOING FROM ONE OF THE FINGERPRINT IMPRESSIONS TO THE OTHER.

INSTITUTE FOR COMPUTER SCIENCES AND TECHNOLOGY

75070005 NEUMANN, ALBRECHT J., PROPOSED IMPLEMENTATION FOR DEVELOPMENT OF USER-TERMINAL PROTOCOLS FOR COMPUTER NETWORK ACCESS, DIV. 640, JUL 75, NBSIR 75-744, NSF CA-68, (COM 75-11072), 17P, 10 REFS

THIS REPORT SUMMARIZES ACTIVITIES UNDERTAKEN AT THE NATIONAL BUREAU OF STANDARDS IN THE AREA OF USER-TERMINAL PROTOCOL STANDARDIZATION WITH SUPPORT FROM THE NATIONAL SCIENCE FOUNDATION, DURING THE LATTER PART OF 1974 AND 1975. ALSO DISCUSSED ARE PRESENT STATUS OF RELATED STANDARDIZATION ACTIVITIES IN AREAS OF COMMAND LANGUAGES, TERMINAL KEYBOARDS, AND TERMINOLOGY. LEGAL IMPLICATIONS OF STANDARDIZATION ARE INDICATED, AND ESTABLISHMENT OF A FEDERAL TASK GROUP FOR STANDARDIZATION IS PROPOSED TO WORK UNDER THE FEDERAL INFORMATION PROCESSING STANDARDS COORDINATING AND ADVISORY COMMITTEE (FIPSCAC).

75080001 ABRAMS, MARSHALL D., IRA W. COTTON, THE SERVICE CONCEPT APPLIED TO COMPUTER NETWORKING, DIV. 650, AUG 75, TN-880, (LC 75-600056, SD C13.46:880), 38P, 19 REFS

THE NETWORK MEASUREMENT SYSTEM (NMS) REPRESENTS THE IMPLEMENTATION OF A NEW APPROACH TO THE PERFORMANCE MEASUREMENT AND EVALUATION OF COMPUTER NETWORK SYSTEMS AND SERVICES. BY FOCUSING ON THE SERVICE DELIVERED TO NETWORK CUSTOMERS AT THEIR TERMINALS, RATHER THAN ON THE INTERNAL MECHANICS OF NETWORK OPERATION, MEASUREMENTS CAN BE OBTAINED WHICH ARE DIRECTLY RELEVANT TO USER NEEDS AND MANAGEMENT CONCERNS. FURTHERMORE, THE TYPE OF MEASUREMENT NECESSARY TO IMPLEMENT THIS APPROACH CAN BE MADE DIRECTLY, WITHOUT PERTURBING THE NETWORK SYSTEM UNDER TEST.
THIS TECHNICAL NOTE INTRODUCES THE SERVICE CONCEPT AND OTHER BACKGROUND INFORMATION NECESSARY TO UNDERSTAND THE NEED FOR AND USE OF THE NMS. THE FUNDAMENTAL DISTINCTION BETWEEN SERVICE AND INTERNAL EFFICIENCY IS CLARIFIED, BOTH IN GENERAL AND IN THE ENVIRONMENT OF COMPUTER NETWORKS. A NUMBER OF DIFFERENT MEASURES OF SERVICE ARE THEN DISCUSSED, FOLLOWED BY THE PRESENTATION OF SEVERAL MODELS OF INTERACTIVE USE OF NETWORKS. THEN, THE PRACTICAL ASPECTS OF GATHERING DATA AND APPLYING THIS INFORMATION TO SERVICE MEASUREMENT ARE REVIEWED, LEADING TO A PRESENTATION OF THE NMS AS IT IS IMPLEMENTED. THE NOTE ENDS WITH A DISCUSSION OF APPLICATIONS FOR THE NMS.

75080002 VAN WYK, CHRISTOPHER J., MATHEMATICS AND ENGINEERING IN COMPUTER SCIENCE, DIV. 600, AUG 75, NBSIR 75-780, 84P

THIS DOCUMENT PRESENTS SHORT DESCRIPTIONS OF FIFTEEN MATHEMATICAL FIELDS AND NINE ENGINEERING FIELDS WHICH ARE IMPORTANT TO COMPUTER SCIENCE TODAY. THE DESCRIPTIONS HAVE FIVE SECTIONS: GENERAL DEFINITION, HISTORICAL PERSPECTIVE, PRINCIPLES AND THEORIES, APPLICATIONS TO COMPUTER SCIENCE, AND REFERENCES. A LIST OF THIRTY-FIVE OTHER TOPICS, NOT SEPARATELY TREATED BUT SUBSUMED UNDER ONE OR MORE OF THE TWENTY-FOUR MAJOR HEADINGS, IS INCLUDED. A BIBLIOGRAPHY LISTS CLASSIC AND RECENT WORKS IN THE AREAS COVERED.

75080003 BERG, JOHN L., EXPLORING PRIVACY AND DATA SECURITY COSTS--A SUMMARY OF A WORKSHOP, DIV. 640, AUG 75, TN-876, (LC 75-600063), 35P

ON FEBRUARY 20, 1975, THE ICST HOSTED A ONE-DAY ROUND-TABLE DISCUSSION ON THE ECONOMIC ASPECTS OF PRIVACY AND DATA SECURITY COSTS. THE WORKSHOP WAS CHAIRED BY GARY BEARDEN, U.S. CIVIL SERVICE COMMISSION. THE PARTICIPANTS WERE WALTER L. ANDERSON, GENERAL ACCOUNTING OFFICE; RICHARD A. EBERHART, OFFICE OF THE SECRETARY, DEPARTMENT OF COMMERCE; EARL P. BASSETT, JR., VICE PRESIDENT, 3M COMPANY; ROBERT CARAVELLA, FEDERAL TRADE COMMISSION; THEODORE CLEMENCE, BUREAU OF CENSUS; RICHARD L. NOLAN, HARVARD BUSINESS SCHOOL; STAN HALPER, COOPERS AND LYBRAND; AND LARRY SIMONETTE, PEAT, MARWICK, MITCHELL AND COMPANY. THE GROUP DISCUSSED THE BENEFITS EDP MANAGERS OR DATA BASE ADMINISTRATORS MIGHT GAIN FROM THE PRIVACY REQUIREMENTS, THE PROCESSES FOR IDENTIFYING DIRECT OR HIDDEN COSTS, AND PROCESSES FOR ALLOCATING COSTS.

75090001 JEFFERY, S., BARRY W. BOEHM, THOMAS E. BELL, COMPUTER PERFORMANCE EVALUATION: REPORT OF THE 1973 NBS/ACM WORKSHOP, DIV. 640, SEP 75, NBS-SP-406, (LC 75-619080), 175P

AN ACM/NBS WORKSHOP ON COMPUTER PERFORMANCE EVALUATION (CPE) WAS HELD IN SAN DIEGO, CALIFORNIA IN MARCH, 1973. THE PAPERS, WORKSHOP DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS PRESENTED IN THIS VOLUME ADDRESS SPECIFIC PROBLEMS IN MAKING COMPUTER PERFORMANCE EVALUATION A COMMONPLACE AND PRODUCTIVE PRACTICE. WHILE SEVERAL OF THE CONCLUSIONS INDICATE THAT IMPROVEMENTS ARE NEEDED IN PERFORMANCE ANALYSIS TOOLS, ANOTHER SUGGESTS THAT IMPROVED APPLICATION OF CPE COULD BE ACHIEVED

BY BETTER DOCUMENTATION DF ANALYSIS APPROACHES, MORE INTEGRATION OF DATA COLLECTION AND MODELING ARE CONSIDERED NECESSARY FDR THE PERFORMANCE ANALYSIS FIELD TO DEVELOP ITS FULL POTENTIAL. PARTICIPANTS NOTED THAT THE COMMON EMPHASIS ON DATA COLLECTION OR MODELING, TO THE EXCLUSION OF CONSIDERING OBJECTIVES, OFTEN SERIDUSLY DEGRADES THE VALUE OF PERFORMANCE ANALYSIS.

7S090002 GRUBB, DANA S., IRA W. COTTON, CRITERIA FDR THE PERFORMANCE EVALUATIDN DF DATA COMMUNICATIONS SERVICES FOR COMPUTER NETWDRKS, DIV. 650, SEP 7S, TN-882, 36P, 37 REFS

IN GENERAL, WHEN TELECDMMUNICATIONS SERVICES ARE USED AS A MEANS OF INTERCHANGING INFORMATIDN BETWEEN PROCESSING SYSTEMS, OR BETWEEN TERMINALS AND SYSTEMS, A NUMBER DF PARAMETERS DETERMINE HOW WELL THAT INTERCHANGE IS PERFORMED. THIS REPORT EXAMINES THE FOLLDWING CHARACTERISTICS OF TELECOMMUNICATIDNS SERVICES: 1) TRANSFER RATE. 2) AVAILABILITY, 3) RELIABILITY, 4) ACCURACY, S) CHANNEL ESTABLISHMENT TIME, 6) NETWORK DELAY, 7) LINE TURNAROUND DELAY, 8) TRANSPARENCY, AND 9) SECURITY. THESE TERMS ARE ALL DEFINED AND THEIR SIGNIFICANCE DISCUSSED. THE EFFECTS OF THESE FACTDRS ON DATA COMMUNICATION NETWORKS ARE ILLUSTRATED.

7SI10001 FONG, ELIZABETH, JOSEPH COLLICA, BEATRICE A. S. MARRON, SIx DATA BASE MANAGEMENT SYSTEMS: FEATURE ANALYSIS AND USER EXPERIENCES, DIV. 640, NDV 7S, TN-887, (SD C13.46:887), 84P, II REFS

THIS REPORT PRESENTS AN DBJECTIVE DVERVIEW DF FEATURES OF SIX SELECTED DATA BASE MANAGEMENT SYSTEMS (DBMS) AND FEDERAL USER EXPERIENCES WITH THESE SYSTEMS. APPLICATION CRITERIA WERE DEVELDPED IN ORDER TO AID IN THE EVALUATIDN AND SELECTION OF DBMS.

THE ADVANTAGES OF GENERALIZED DBMS OVER TRADITIONAL METHODS OF SOFTWARE SYSTEM DEVELOPMENT ARE DISCUSSED. THE CRITERIA FDR CHDICE DF THE SIX SYSTEMS' FEATURES ARE PRESENTED. THE DATA REPDRTED WERE GATHERED FROM TWO SOURCES: VENDORS AND USERS. VENDOR INFDRMATIDN CDNSISTED DF SIDE-BY-SIDE PRESENTATIDN OF FEATURES OF THE SIX DBMS. USER EXPERIENCES REPDRTED ARE SUMMARIZED UNDER APPROPRIATE HEADINGS. THIS INFORMATIDN IS USED TO DERIVE APPLICATICN CRITERIA FOR ASSESSING THE USABILITY AND OPERATIDNAL SUITABILITY OF DBMS TO A VARIETY DF DATA PRDCESSING REQUIREMENTS.

THE SIx SYSTEMS REVIEWED ARE: ADABAS, IMS/VS, INQUIRE, MODEL 204, SYSTEM 2000, AND TOTAL.

7SI10002 EVANS, JDHN M., JR., DR., JAMES S. ALBUS, ANTHDNY J. BARBERA, ROBERT ROSENTHAL, WILLIAM B. TRUITT, GUIDE TO IMPRDVING THE PERFORMANCE OF A MANIPULATOR SYSTEM FDR NUCLEAR FUEL HANDLING THRDUGH COMPUTER CONTROLS, DIV. 600, NDV 7S, NBSIR 7S-973, 54P

THE DFFICE DF DEVELDPMENT AUTDMATION AND CDNTRDL TECHNDLDGY OF THE INSTITUTE FOR COMPUTER SCIENCES AND TECHNDLDGY DF THE NATIONAL BUREAU DF STANDARDS PROVIDES ADVISING SERVICES, STANDARDS AND GUIDELINES ON INTERFACE AND CDMPUTER CDNTROL SYSTEMS, AND PRRFORMANCE SPECIFICATIONS FOR THE PROCUREMENT AND USE OF COMPUTER CONTROLLED MANIPULATORS AND OTHER COMPUTER BASED AUTDMATION SYSTEMS. THESE OUTPUTS HELP DTHER AGENCIES AND INDUSTRY APPLY THIS TECHNOLOGY TO INCREASE PRODUCTIVITY AND IMPRDVE WDRK QUALITY BY REMOVING MEN FROM HAZARDOUS ENVIRONMENTS.

IN FY 74 PERSONNEL FRDM THE OAK RIDGE NATIONAL LABDRATORY VISITED NBS TO DISCUSS THE FEASIBILITY OF USING COMPUTER CONTRDL TECHNIQUES TO IMPROVE THE DPERATION OF REMDTE CDNTROL MANIPULATORS IN NUCLEAR FUEL REPRDCESSING. SUBSEQUENT DISCUSSIDNS LED TO AN AGREEMENT FOR NBS TO DEVELOP A CONCEPTUAL DESIGN FOR SUCH A COMPUTER CONTROL SYSTEM FOR THE PAR MDDEL 3000 MANIPULATOR IN THE THORIUM URANIUM RECYCLE FACILITY (TURF) AT ORNL. THIS REPORT PRDVIDES THE REQUIRED ANALYSIS AND CDNCEPTUAL DESIGN. COMPLETE COMPUTER PRDGRAMS ARE INCLUDED FOR TESTING DF CDMPUTER INTERFACES AND FOR ACTUAL ROBOT CONTROL IN BOTH PDINT-TD-PDINT AND CONTINUOUS PATH MODES.

7S120101 INDEX DF AUTDMATED SYSTEM DESIGN REQUIREMENTS AS DERIVED FRDM THE DMB PRIVACY ACT IMPLEMENTATION GUIDELINES, DIV. 640, DIV. 600, 1 DEC 7S, NBSIR 7S-909, I4P

THIS INDEX IS A LIST OF CERTAIN REQUIREMENTS WHICH MUST BE CDNSIDERED BY FEDERAL TECHNICAL AND ADMIMISTRATIVE PERSONNEL IN DRDER TD CDMPLY WITH THOSE PRDVISIDNS OF THE PRIVACY ACT DF 1974 RELATING TD AUTOMATED SYSTEMS DESIGN AND DEVELDPMENT, THIS INDEX HAS BEEN DERIVED FRDM THE OFFICE OF MANAGEMENT AND BUDGET (OMB) GUIDELINES FOR IMPLEMENTING THOSE

PROVISIONS. EACH REQUIREMENT LISTED CONTAINS A REFERENCE TO AN APPLICABLE PART OF THE PRIVACY ACT AND TO A PAGE AND COLUMN NUMBER OF THE OMB GUIDELINES AS THEY APPEAR IN THE 'FEDERAL REGISTER'. THEREFORE, THESE DOCUMENTS MUST BE USED IN CONJUNCTION WITH THIS INDEX. FURTHERMORE, A FAMILIARITY WITH THESE DOCUMENTS WILL INCREASE THE UTILITY OF THIS INDEX.

76010010 O'NEILL, JOSEPH T., MUMPS LANGUAGE STANDARD, DIV. 640, JAN 76, NBS HB-11B, S-7750007, (LC 75-619261, SD CI3.11:11B), 144P

THIS NBS HANDBOOK CONTAINS A THREE-PART DESCRIPTION OF VARIOUS ASPECTS OF THE MUMPS COMPUTER PROGRAMMING LANGUAGE. PART I, THE MUMPS LANGUAGE SPECIFICATION, CONSISTS OF A STYLIZED ENGLISH NARRATIVE DEFINITION OF THE MUMPS LANGUAGE WHICH WAS ADOPTED AND APPROVED FOR PUBLICATION AS A TYPE A RELEASE OF THE MUMPS DEVELOPMENT COMMITTEE ON MARCH 12, 1975. PART II, THE MUMPS TRANSLATION DIAGRAMS, REPRESENTS A FORMAL DEFINITION OF THE LANGUAGE DESCRIBED IN PART I, EMPLOYING A FORM OF LINE DRAWINGS TO ILLUSTRATE SYNTACTIC AND SEMANTIC RULES GOVERNING EACH OF THE LANGUAGE ELEMENTS; IT WAS ADOPTED AND APPROVED FOR PUBLICATION AS A TYPE A RELEASE OF THE MUMPS DEVELOPMENT COMMITTEE ON SEPTEMBER 17, 1975. PART III, THE MUMPS PORTABILITY REQUIREMENTS, IDENTIFIES CONSTRAINTS ON THE IMPLEMENTATION AND USE OF THE LANGUAGE FOR THE BENEFIT OF PARTIES INTERESTED IN ACHIEVING MUMPS APPLICATION CODE PORTABILITY; IT WAS ADOPTED AND APPROVED FOR PUBLICATION AS A TYPE A RELEASE OF THE MUMPS DEVELOPMENT COMMITTEE ON SEPTEMBER 17, 1975.

76020001 GOLDSTEIN, ROBERT C., HENRY H. SEWARD, A COMPUTER MODEL TO DETERMINE LOW COST TECHNIQUES TO COMPLY WITH THE PRIVACY ACT OF 1974, DIV. 640, D. P. MANAGEMENT CORP., LEXINGTON, MA, FEB 76, NBSIR 76-985, S-35935, 57P

THIS DOCUMENT CONTAINS A COMPLETE DESCRIPTION OF THE STEPS NECESSARY TO RUN THE COST OF PRIVACY MODEL ALONG WITH A DESCRIPTION OF THE COMPUTER PROGRAM WHICH IMPLEMENTS THE MODEL. THIS DOCUMENT DESCRIBES THE GENERAL SYSTEM REQUIREMENTS FOR RUNNING THE PROGRAM, HOW TO INPUT INFORMATION TO THE MODEL AND HOW TO INTERPRET THE OUTPUT.

THE MODEL, WHICH WAS DEVELOPED FOR THE NATIONAL BUREAU OF STANDARDS BY THE D.P. MANAGEMENT CORPORATION OF LEXINGTON, MASSACHUSETTS, ACCEPTS INPUTS ABOUT PERSONAL DATA SYSTEMS, UTILIZES ALGORITHMS TO PROVIDE INCREMENTAL RESOURCES REQUIRED TO COMPLY WITH THE PRIVACY OF 1974, AND APPLIES COST FACTORS TO THE RESOURCES TO PROVIDE A COST ESTIMATE. COST ESTIMATES OF ALTERNATIVE COMPLIANCE TECHNIQUES CAN BE GENERATED. THESE CAN LATER BE COMPARED BY THE USER TO DETERMINE A COST EFFECTIVE METHOD OF COMPLIANCE.

76020002 WATKINS, SHIRLEY W., MARSHALL D. ABRAMS, INTERPRETATION OF DATA IN THE NETWORK MEASUREMENT SYSTEM, DIV. 650, FEB 76, TN-897, 46P, 15 REFS

THE NETWORK MEASUREMENT SYSTEM (NMS) REPRESENTS AN IMPLEMENTATION OF A NEW APPROACH TO THE PERFORMANCE MEASUREMENT AND EVALUATION OF COMPUTER NETWORK SYSTEMS AND SERVICES. IN THIS REPORT, THE INTERPRETATION OF DATA WITHIN THE NMS IS DESCRIBED. THESE DATA HAVE BEEN ACQUIRED BY THE NETWORK MEASUREMENT MACHINE (NMM) COMPONENT OF THE NMS AND ARE THEN INTERPRETED BY A DATA ANALYSIS PACKAGE (DAP), WHICH PRODUCES MEANINGFUL INFORMATION CONCERNING THE QUALITY OF NETWORK SERVICE DELIVERED TO INTERACTIVE TERMINAL USERS AS WELL AS A CHARACTERIZATION OF USER DEMANDS AND NETWORK COMMUNICATION FACILITY UTILIZATION.

THIS REPORT TRACES THE FLOW OF DATA FROM THE TIME OF CAPTURE BY THE MINICOMPUTER-BASED NMM THROUGH THE SEVERAL PHASES OF MODELING AND STRUCTURING IN THE DAP. INCLUDED IN THIS DESCRIPTION IS THE STATISTICAL TREATMENT OF THE DATA WHICH PROVIDES QUANTITATIVE MEASURES OF VARIOUS ASPECTS OF NETWORK PERFORMANCE.

76030001 LEWIS, T. G., MINICOMPUTERS: AN ATTITUDE, DIV. 640, MAR 76, NBSIR 76-1033, 50P

MINICOMPUTERS ARE DEFINED IN DOZENS OF WAYS: BY WORD LENGTH, MEMORY SIZE, SPEED, COST, APPLICATIONS, PERIPHERALS, SOFTWARE, AND DESIGN. THE DEFINITION USED HERE INCLUDES ALL LIMITED RESOURCE COMPUTERS AND MORE IMPORTANTLY EMPHASIZES THE ATTITUDE BEHIND MINICOMPUTING, THAT THE UNDERTAKING BE FRUGAL BUT ADEQUATE. MINICOMPUTER ARCHITECTURES ARE CATEGORIZED ACCORDING TO TYPE OF CONTROL (RANDOM LOGIC OR MICORPROGRAMMED), BUS STRUCTURE (DISTRIBUTED OR CENTRAL), NUMBER OF WORKING REGISTERS, AND INSTRUCTIONS (SPECIAL PURPOSE AND LIMITED). THE MINICOMPUTER ATTITUDE IS DEFINED AS THE ATTITUDE THAT PLACES IMPORTANCE UPON DESIGN OF SIMPLE, STRAIGHTFORWARD, SPECIAL PURPOSE, DEDICATED COMPUTING SYSTEMS. PROGRAMMING AND SOFTWARE

IS THE MOST SIGNIFICANT PROBLEM FACED WITHIN MINICOMPUTING. THIS SUGGESTS THAT COMPLEXITY SHOULD BE FORCED INTO HARDWARE BECAUSE HARDWARE IS LESS EXPENSIVE THAN SOFTWARE. HIGH LEVEL LANGUAGE SUPPORT IS NEEDED.

THREE DEMONSTRATION MINIS ARE USED TO SHOW HOW HARDWARE COMPLEXITY INFLUENCES SOFTWARE COMPLEXITY (AND THEREFORE SOFTWARE COST). CONCLUDING SPECULATIONS SUGGEST MINIS WILL OVERCOME CURRENT LIMITATIONS, WILL INCORPORATE MORE COMPLEXITY INTO HARDWARE, AND USE THE MULTI-LEVEL NATURE OF SOFT-, FIRM-, AND HARDWARE TO ADVANTAGE IN DEVELOPING SPECIAL PURPOSE SYSTEMS.

76040001 WOLCOTT, NORMAN M., JOSEPH HILSENRATH, A CONTRIBUTION TO COMPUTER TYPESETTING TECHNIQUES: TABLES OF COORDINATES FOR HERSHEY'S REPERTORY OF OCCIDENTAL TYPE FONTS AND GRAPHIC SYMBOLS, DIV. 630, APR 76, NBS-SP-424, 173P

THESE TABLES PRESENT COORDINATES FROM WHICH IT IS POSSIBLE TO GENERATE 1377 DIFFERENT ALPHABETIC AND GRAPHIC CHARACTERS ON EITHER COM DEVICES OR ON DIGITAL PLOTTERS. THE TABLES, ORIGINALLY DEVELOPED BY DR. A. V. HERSHEY OF THE NAVAL WEAPONS LABORATORY, ARE AUGMENTED HERE BY CORRESPONDING FIGURES WHICH SHOW FOR EACH CHARACTER THE LOCATION OF THE TABULATED POINTS AND THE MANNER IN WHICH THEY ARE CONNECTED. THE TABLES CAN BE USED WITH EXISTING TYPOGRAPHIC SYSTEMS TO COMPOSE PAGES FOR SCIENTIFIC AND MATHEMATICAL PUBLICATIONS OF GRAPHIC ARTS QUALITY EITHER ON COM DEVICES OR FLAT-BED PLOTTERS. NUMEROUS APPLICATIONS ARE DISCUSSED AND ILLUSTRATED. THE TABLES ARE ALSO AVAILABLE ON A MAGNETIC TAPE IN EITHER BCD OR ASCII FORMAT FROM THE NATIONAL TECHNICAL INFORMATION SERVICE.

76040002 ROSENTHAL, ROBERT, DON E. RIPPY, HELEN M. WOOD, THE NETWORK MEASUREMENT MACHINE--A DATA COLLECTION DEVICE FOR MEASURING THE PERFORMANCE AND UTILIZATION OF COMPUTER NETWORKS, DIV. 650, APR 76, TN-912, 91P

THE NETWORK MEASUREMENT MACHINE (NMM) IS A DEVICE USED TO ACQUIRE DATA FOR THE PERFORMANCE MEASUREMENT OF COMPUTER NETWORK SYSTEMS AND SERVICES. BY FOCUSING ON THE SERVICE DELIVERED TO NETWORK CUSTOMERS AT THEIR TERMINALS, MEASUREMENTS CAN BE MADE THAT ARE DIRECTLY RELEVANT TO USER NEEDS AND TO MANAGEMENT CONCERNS.

THIS TECHNICAL REPORT PRESENTS THE DETAILS OF A DATA ACQUISITION DEVICE. THE DEVICE IS A MINICOMPUTER-BASED SYSTEM THAT EMPLOYS REGULAR (OFF-THE-SHELF) AND SPECIAL PURPOSE HARDWARE UNDER THE CONTROL OF A SPECIALLY WRITTEN SOFTWARE ACQUISITION SYSTEM. THE TECHNICAL ASPECTS OF INSERTING THE NMM INTO THE DATA COMMUNICATIONS PORTION OF A COMPUTER NETWORK ARE DISCUSSED. THE DETAILED NATURE OF BOTH THE HARDWARE AND THE SOFTWARE DATA ACQUISITION SYSTEM IS PRESENTED WITH A DISCUSSION OF THE IMPORTANT DESIGN DECISION TRADE-OFFS.

76040003 RUTHBERG, ZELLA G., GLORIA R. BOLOTSKY, SOFTWARE EXCHANGE DIRECTORY FOR UNIVERSITY RESEARCH ADMINISTRATION, DIV. 640, APR 76, TN-916, NSF RMI74-19417 A02, 215P

THE INSTITUTE FOR COMPUTER SCIENCES AND TECHNOLOGY (ICST) AT THE NATIONAL BUREAU OF STANDARDS (NBS) HAS DEVELOPED A SOFTWARE EXCHANGE DIRECTORY FOR THE UNIVERSITY RESEARCH ADMINISTRATION UNDER A CONTRACT WITH THE RESEARCH MANAGEMENT IMPROVEMENT PROGRAM (RMIP) AT THE NATIONAL SCIENCE FOUNDATION (NSF). THE ONE HUNDRED UNIVERSITIES AND COLLEGES RECEIVING THE LARGEST FEDERAL FUNDING FOR RESEARCH AND DEVELOPMENT WERE SENT AN OFFICE OF MANAGEMENT AND BUDGET (OMB) APPROVED SURVEY INSTRUMENT DEVELOPED FOR THIS PURPOSE AT ICST. SEVENTY-FIVE INSTITUTIONS SENT RESPONSES SUITABLE FOR 83 DIRECTORY ENTRIES UNDER ADMINISTRATIVE INFORMATION AND 315 DIRECTORY ENTRIES UNDER SOFTWARE PACKAGE SUMMARIES. AN ADMINISTRATIVE ENTRY CONTAINS INFORMATION ON THE REPORTING UNIT, THE BASIC ADMINISTRATIVE STRUCTURE AND PARAMETERS, COMPUTER USAGE, AUTOMATED FUNCTIONAL AREAS, AND COMMENTS. A PACKAGE ENTRY CONTAINS A FUNCTIONAL DESCRIPTION, SOFTWARE AND HARDWARE CHARACTERISTICS, HISTORY, AVAILABILITY AND COMMENTS. THE ADMINISTRATIVE ENTRIES HAVE BEEN INDEXED BY FUNDING SIZE, SIZE OF RESEARCH STAFF, NUMBER OF FEDERAL GRANTING AGENCIES, AND NUMBER OF CONTRACTS AND GRANTS AWARDED IN FISCAL YEAR 1974. THE SOFTWARE PACKAGES HAVE BEEN INDEXED BY FUNCTION, COMPUTER USED AND LANGUAGE USED. THE DETAILED ENTRIES AND INDEXES SHOULD HELP OPEN COMMUNICATION CHANNELS FOR THIS COMMUNITY OF COMPUTER USERS AND THUS MAXIMIZE TRANSFERABILITY OF THESE PROGRAMS BETWEEN INSTITUTIONS. THEY ALSO DRAW A COMPREHENSIVE STATE-OF-THE-ART PICTURE OF THIS AREA OF COMPUTER USE.

76040005 ABBOT, R. P., J. S. CHIN, J. E. DONNELLEY, W. L. KONIGSFORD, S. TOKUBO, D. A. WEBB, SECURITY ANALYSIS AND ENHANCEMENTS OF COMPUTER OPERATING SYSTEMS, DIV. 640, LAWRENCE LIVERMORE LAB., CA, RISOS PROJECT, APR 76, JUL 74-DEC 75, NBSIR 76-1041, 69P, 9 REFS

THE PROTECTION OF COMPUTER RESOURCES, DATA OF VALUE, AND INDIVIDUAL PRIVACY HAS MOTIVATED A CONCERN FOR SECURITY OF EDP INSTALLATIONS, ESPECIALLY OF THE OPERATING SYSTEMS. IN THIS REPORT, THREE COMMERCIAL OPERATING SYSTEMS ARE ANALYZED AND SECURITY ENHANCEMENTS SUGGESTED. BECAUSE OF THE SIMILARITY OF OPERATING SYSTEMS AND THEIR SECURITY PROBLEMS, SPECIFIC SECURITY FLAWS ARE FORMALLY CLASSIFIED ACCORDING TO A TAXONOMY DEVELOPED HERE. THIS CLASSIFICATION LEADS TO A CLEARER UNDERSTANDING OF SECURITY FLAWS AND AIDS IN ANALYZING NEW SYSTEMS. THE DISCUSSIONS OF SECURITY FLAWS AND THE SECURITY ENHANCEMENTS OFFER A STARTING REFERENCE FOR PLANNING A SECURITY INVESTIGATION OF AN EDP INSTALLATION'S OPERATING SYSTEM./

76040013 MCEWEN, HAZEL E., MANAGEMENT OF DATA ELEMENTS IN INFORMATION PROCESSING (PROCEEDINGS OF THE SECOND NATIONAL SYMPOSIUM, 1975 OCTOBER 23-24), DIV. 600, APR 76, NBSIR 76-1015, (PB-249 530), 278P

CONTINUING TECHNOLOGICAL ADVANCES IN COMPUTERS AND COMMUNICATIONS MAKE POSSIBLE THE INTEGRATION OF DATA SYSTEMS AND THE EXCHANGE OF DATA AMONG THEM ON AN EXPANDING SCALE. HOWEVER, THE FULL EFFECT OF THESE ADVANCES CANNOT BE REALIZED UNLESS THE NEED FOR UNIFORM UNDERSTANDING OF THE COMMON INFORMATION (DATA ELEMENTS) AND THEIR EXPRESSION IN DATA SYSTEMS IS RECOGNIZED AND A MEANS PROVIDED TO EFFECTIVELY MANAGE THIS INFORMATION. THE INCREASING INTERRELATIONSHIPS AMONG THE DATA SYSTEMS OF FEDERAL, STATE AND LOCAL GOVERNMENTS, AND WITH INDUSTRY AND THE PUBLIC ADD EMPHASIS AND DIMENSION TO THE NEED FOR THE IMPROVED MANAGEMENT OF DATA ELEMENTS IN INFORMATION PROCESSING.

THESE PROCEEDINGS ARE FOR THE SECOND SYMPOSIUM ON THE MANAGEMENT OF DATA ELEMENTS IN INFORMATION PROCESSING HELD AT THE NATIONAL BUREAU OF STANDARDS ON 1975 OCTOBER 23-24. OVER 300 REPERSENTATIVES OF FEDERAL AND STATE GOVERNMENTS, INDUSTRY AND UNIVERSITIES FROM 29 STATES, FROM JAPAN, AND THE UNITED KINGDOM WERE IN ATTENDANCE. TWENTY-NINE SPEAKERS DISCUSSED THE ROLE OF THE DATA MANAGER, COMMUNICATIONS NEEDS FOR DATA STANDARDS, DATA ELEMENT DIRECTORIES, STANDARD CODES FOR CHARACTER AND CONTROL, USE OF CHECK CHARACTERS, DATA ELEMENTS IN BIBLIOGRAPHIC DATA BASES, PRODUCT CODING, CODING FOR CLINICAL MEDICINE, HUMAN FACTORS, DATA RESOURCE MANAGEMENT, DATA BASE MANAGEMENT SYSTEMS, AND OTHER SUBJECTS RELATED TO DATA STANDARDIZATION AND DATA MANAGEMENT EFFORTS.

76060001 GOLDSTEIN, ROBERT C., HENRY H. SEWARD, RICHARD L. NOLAN, A METHODOLOGY FOR EVALUATING ALTERNATIVE TECHNICAL AND INFORMATION MANAGEMENT APPROACHES TO PRIVACY REQUIREMENTS, DIV. 640, JUN 76, TN-906, 72P

COST BECOMES AN EARLY CONCERN IN APPLYING PRIVACY SAFEGUARDS TO ANY COMPUTERIZED RECORD-KEEPING SYSTEM. TO DETERMINE PRIVACY COST IMPACT ONE REQUIRES A CONCRETE AND RIGOROUS APPROACH THAT PERMITS REPEATED ANALYSIS OF CAREFULLY DOCUMENTED ASSUMPTIONS. SUCH A METHODOLOGY APPEARS IN THE WORK REPORTED IN THE BOOK 'THE COST OF PRIVACY' BY DR. ROBERT C. GOLDSTEIN. THIS REPORT REPRESENTS THE APPLICATION OF THAT METHODOLOGY TO THE TECHNICAL REQUIREMENTS FLOWING FROM THE PRIVACY ACT OF 1974 (PL 93-579).

THE METHODOLOGY PRESENTED REDUCES THE LEGISLATION TO 17 COMPLIANCE STEPS. EACH COMPLIANCE STEP THEN DECOMPOSES INTO ONE OR MORE SPECIFIC ACTIONS REQUIRED OF THE RECORD-KEEPER. THE ACTIONS, IN TURN, TRANSLATE INTO THE EXPENDITURE OF DIFFERENT RESOURCES. THE RESOURCES, IN DOLLARS, ARE COMPUTED BY A SET OF ALGORITHMS COLLECTIVELY CALLED A PRIVACY MODEL AND IMPLEMENTED AS A COMPUTER PROGRAM.

THE PRIVACY MODEL CONTAINS ALGORITHMS REFLECTING RESOURCE EXPENDITURES FOR 56 DISTINCT ACTIONS. WRITTEN AS A FORTRAN PROGRAM, THE MODEL PRODUCES SEVERAL PRINTOUTS THAT SHOW THE USER THE CONSEQUENCES OF THE INPUT DATA. IN ADDITION TO A TOTAL COST FOR CONVERSION AND AN ANNUAL OPERATING COST, THE MODEL PROVIDES SUB-TOTAL COSTS FOR EACH COMPLIANCE STEP. THE MODEL'S POTENTIAL USES INCLUDE THE COMPARISON OF COSTS ASSOCIATED WITH ALTERNATIVE SAFEGUARDS, THE SELECTION OF AN OPTIMAL SET OF COST-EFFECTIVE SAFEGUARDS, AND THE ANALYSIS OF THOSE FACTORS HAVING THE GREATEST IMPACT ON COSTS.

76070001 ROSENTHAL, ROBERT, A REVIEW OF NETWORK ACCESS TECHNIQUES WITH A CASE STUDY: THE NETWORK ACCESS MACHINE, DIV. 650, JUL 76, TN-917, NSF OCR-72-01206, 36P, 29 REFS

THE COMPUTER INDUSTRY'S ABILITY TO SERVE A DIVERSE AND EXPANDING USER COMMUNITY IS EVIDENCED BY THE RAPID GROWTH OF COMPUTER NETWORK SERVICES. COMPUTER SERVICE PROVIDERS DESIGN AND MARKET THEIR OWN OFFERINGS AS THEY DEEM BEST, GIVEN THEIR OWN MARKET AND THEIR OWN SET OF RESOURCES. THIS HAS LED TO A PROLIFERATION OF SIMILAR RESOURCES REQUIRING DIFFERENT USER ACCESS PROCEDURES. WITH EMPHASIS ON CURRENTLY OPERATING AND PLANNED SYSTEMS THAT ASSIST USERS IN ACCESSING AVAILABLE

NETWORK SERVICES. THIS REPORT IOENTIFIES THE TECHNIQUES USEO IN NETWORK ACCESS DEVICES. BY EXAMINING THESE OEVICES, THE TREND TOWARO IMPROVING THE INTERFACE BETWEEN THE USER ANO THE COMPUTER IS BROUGHT MORE CLEARLY INTO FOCUS ANO UP TO OATE.

ONE SPECIFIC SOLUTION--A NETWORK ACCESS MACHINE (NAM)--IS OESCRIBEO IN OETAIL. THE NAM IS A MINICOMPUTER SYSTEM THAT ACTS AS A NETWORK ACCESS POINT FOR A USER AT HIS TERMINAL ANO ASSISTS THE USER THROUGH THE AUTOMATIC EXECUTION OF ACCESS PROCEOURES. THIS MINICOMPUTER FACILITY ALLOWS THE USER TO SPECIFY (OR TO HAVE SPECIFIEO) HIS OWN NETWORK COMMANO SEQUENCES FOR EXECUTION ON A SPECIFIEO NETWORK ANO HOST CONNECTEO TO THAT NETWORK. COMPUTER RESPONSES ARE ANALYZEO TO ASSURE AGREEMENT WITH THOSE ANTICIPATEO FOR SPECIFIC COMMANOS. CONOITIONAL PARAMETERIZEO EXPANSIONS ALLOW THE USE OF THE SAME COMMANOS ON OIFFERENT HOST COMPUTER ANO OIFFERENT NETWORKS.

76070002 ABRAMS, MARSHALL O., SIEGFRIEO TREU, ROBERT P. BLANC, MEASUREMENT OF COMPUTER COMMUNICATION NETWORKS, DIV. 650, JUL 76, TN-908, NSF OCR-72-01206A05, 95P

THIS REPORT IS CONCERNEO WITH AIOING THOSE RESPONSIBLE FOR THE PROCUREMENT OF COMPUTER SERVICES FROM A REMOTE ACCESS NETWORK BY PROVIOING A OESCRIPTION OF THE MEASURES, TOOLS, ANO TECHNIQUES APPLICABLE TO THE PERFORMANCE MEASUREMENT OF COMPUTER COMMUNICATION NETWORKS. COST CONSIOERATIONS ARE OISCUSSEO AS A MAJOR COMPONENT OF EVALUATION. MEASUREMENT ANO EVALUATION METHOOOLOGY ARE SURVEYEO, INCLUOING VARIOUS OPERATIONAL TOOLS ANO TECHNIQUES. SOME EXEMPLARY DATA ARE ALSO PRESENTEO. ALTHOUGH THE CONSTITUENTS ARE ALREAOY PRESENT, A NEATLY PACKAGEO METHOOOLOGICAL PROOUCT, PERHAPS IN THE FORM OF A WELL-STRUCTUREO USER'S GUIOE TO NETWORK PERFORMANCE MEASUREMENT, IS NOT YET AVAILABLE.

76070003 CONTI, OENNIS M., USE OF SYNTHETIC BENCHMARKS FOR ESTIMATING SERVICE BUREAU PROCESSING CHARGES, OIV. 640, JUL 76, TN-920, 47P

THIS REPORT OESCRIBES THE OEVELOPMENT OF A NEW SYNTHETIC BENCHMARK TECHNIQUE FOR ESTIMATING BATCH CHARGES AT SERVICE BUREAU SITES. THIS TECHNIQUE WAS USEO TO ESTIMATE THE COST OF PROCESSING A LARGE BATCH WORKLOAO AT A NUMBER OF SERVICE BUREAUS WITHIN THE SAME MAINFRAME FAMILY. THE METHOO WAS FOUNO TO BE LOW-COST, YET REASONABLY ACCURATE FOR A CERTAIN CLASS OF SERVICE BUREAU CHARGING ALGORITHMS. REFINEMENTS OF THIS METHOO ARE SUGGESTEO WHICH WILL EXTENO ITS APPLICABILITY TO OTHER ALGORITHMS. THE PROCEDURES USEO TO CREATE ANO RUN THE BENCHMARK, TOGETHER WITH THE PROJECTION OF TOTAL WORKLOAO COST ARE OESCRIBEO.

76080001 OEUTSCH, OONALO R., APPRAISAL OF FEOERAL GOVERNMENT COBOL STANOAROS AND SOFTWARE MANAGEMENT: SURVEY RESULTS, OIV. 640, AUG 76, NBSIR 76-1100, 73P

THIS REPORT SUMMARIZES THE RESULTS OF A SURVEY OF SELECTEO FEDERAL GOVERNMENT AUTOMATIC OATA PROCESSING (AOP) INSTALLATIONS. UNOERTAKEN PRIMARILY AS AN EVALUATION OF NATIONAL BUREAU OF STANOAROS (NBS) ACTIVITIES IN SUPPORT OF THE STANOAROIZATION OF THE COBOL PROGRAMMING LANGUAGE, THE STUOY ALSO OEALT WITH SOFTWARE MANAGEMENT TOOLS ANO PRACTICES. THE SURVEY SAMPLE WAS SELECTEO FROM A SUBSET OF ALL KNOWN FEOERAL GOVERNMENT AOP UNITS; SPECIFICALLY, ONLY OOMESTIC INSTALLATIONS WITH AT LEAST ONE GENERAL PURPOSE HAROWARE SYSTEM CAPABLE OF SUPPORTING A MOOERN COBOL COMPILER WERE INCLUOEO. RESPONSES WERE RECEIVED FROM OVER 70 PERCENT OF THE 190 INSTALLATIONS INCLUOEO IN THE SAMPLE. THE MAJOR PORTION OF THIS OOCUMENT IS MAOE UP OF TABULAR SUMMARIZATIONS OF ALL RESPONSES FOR EACH SURVEY QUESTION. GROSS STATISTICS ANO FREQUENCY OISTRIBUTIONS ARE PRESENTEO ON A QUESTION BY QUESTION BASIS. NO INTERQUESTION RELATIONSHIPS ARE ANALYZEO. THE APPENOICES INCLUOE A COMPREHENSIVE OISCUSSION OF THE SAMPLING METHOOOLOGY ANO SURVEY MECHANICS AND A REPROOUCTION OF THE SURVEY INSTRUMENT WITH CROSS REFERENCES TO RESPONSE TABULATIONS APPEARING IN THE REPORT.

76080009 LINOEN, THEOOORE A., OPERATING SYSTEM STRUCTURES TO SUPPORT SECURITY ANO RELIABLE SOFTWARE, OIV. 640, AUG 76, TN-919, 51P, 70 REFS

SECURITY HAS BECOME AN IMPORTANT ANO CHALLENGING GOAL IN THE OESIGN OF COMPUTER SYSTEMS. THIS SURVEY FOCUSES ON TWO SYSTEM STRUCTURING CONCEPTS THAT SUPPORT SECURITY; NAMELY, SMALL PROTECTION OOMAINS ANO EXTENOED-TYPE OBJECTS. THESE TWO CONCEPTS ARE ESPECIALLY PROMISING BECAUSE THEY ALSO SUPPORT RELIABLE SOFTWARE BY ENCOURAGING ANO ENFORCING HIGHLY MODULAR SOFTWARE STRUCTURES--IN BOTH SYSTEMS SOFTWARE ANO IN APPLICATIONS PROGRAMS. SMALL PROTECTION DOMAINS ALLOW EACH SUBUNIT OR

MODULE OF A PROGRAM TO BE EXECUTED IN A RESTRICTED ENVIRONMENT THAT CAN PREVENT UNANTICIPATED OR UNDESIRABLE ACTIONS BY THAT MODULE. EXTENDED-TYPE OBJECTS PROVIDE A VEHICLE FOR DATA ABSTRACTION BY ALLOWING OBJECTS OF NEW TYPES TO BE MANIPULATED IN TERMS OF OPERATIONS THAT ARE NATURAL FOR THESE OBJECTS. THIS PROVIDES A WAY TO EXTEND SYSTEM PROTECTION FEATURES SO THAT PROTECTION CAN BE ENFORCED IN TERMS OF APPLICATIONS-ORIENTED OPERATIONS ON OBJECTS. THIS SURVEY ALSO EXPLAINS ONE APPROACH TOWARD IMPLEMENTING THESE CONCEPTS THOROUGHLY AND EFFICIENTLY--AN APPROACH BASED ON THE CONCEPT OF CAPABILITIES INCORPORATED INTO THE ADDRESSING STRUCTURE OF THE COMPUTER. CAPABILITY-BASED ADDRESSING IS SEEN AS A PRACTICAL WAY TO SUPPORT FUTURE REQUIREMENTS FOR SECURITY AND RELIABLE SOFTWARE WITHOUT SACRIFICING REQUIREMENTS FOR PERFORMANCE, FLEXIBILITY, AND SHARING./

76090001 WOOD, HELEN M., SHIRLEY W. WATKINS, IRA W. COTTON. ANNOTATED BIBLIOGRAPHY OF THE LITERATURE ON RESOURCE SHARING COMPUTER NETWORKS. REVISED 1976. DIV. 650, SEP 76. NBS-SP-384 (REVISED 1976). NSF OCR72-01206 A05. (LC 73-600268). 179P

THIS BIBLIOGRAPHY CONSISTS OF OVER 1,000 REFERENCES WITH CRITICAL ANNOTATIONS TO THE LITERATURE ON COMPUTER NETWORKS. A CLASSIFICATION SCHEME HAS BEEN DEVELOPED TO MAKE EACH CITATION MORE ACCESSIBLE BY GENERAL TOPIC. FIVE INDEX TO THE BIBLIOGRAPHY ARE INCLUDED: AUTHOR INDEX, CORPORATE AUTHOR INDEX, NETWORK INDEX, TITLE WORD INDEX, AND REPORT NUMBER INDEX.

76090002 BERG, JOHN L., DATA BASE DIRECTIONS. THE NEXT STEPS. DIV. 640, SEP 76. NBS-SP-451. (LC 76-608219). 175P

WHAT INFORMATION ABOUT DATA BASE TECHNOLOGY DOES A MANAGER NEED TO MAKE PRUDENT DECISIONS ABOUT USING THIS NEW TECHNOLOGY? TO PROVIDE THIS INFORMATION THE NATIONAL BUREAU OF STANDARDS AND THE ASSOCIATION FOR COMPUTING MACHINERY ESTABLISHED A WORKSHOP OF APPROXIMATELY 80 EXPERTS IN FIVE MAJOR SUBJECT AREAS. THE FIVE SUBJECT AREAS WERE AUDITING, EVOLVING TECHNOLOGY, GOVERNMENT REGULATIONS, STANDARDS, AND USER EXPERIENCE. EACH AREA PREPARED A REPORT CONTAINED IN THESE PROCEEDINGS. THE PROCEEDINGS PROVIDE GUIDANCE ON STEPS MANAGERS SHOULD FOLLOW TO PREPARE THEMSELVES AND THEIR ORGANIZATION FOR THE INSTALLATION OF DATA BASE MANAGEMENT CONCEPTS. THE AUDITING WORKING PANEL NOTED THE INCREASED VULNERABILITY OF ORGANIZATIONS WHO INTEGRATE THEIR FORMERLY DISPERSED AND REDUNDANT FILES INTO A DATA BASE AND SUGGEST ACTIONS TO ADDRESS THIS RISK. THE TECHNOLOGY REPORT NOTED SEVERAL PROMISING PARALLEL DEVELOPMENTS BUT CONCLUDED THAT THE FUTURE WOULD SEE EVOLVING, RATHER THAN REVOLUTIONALY DATA BASE PROGRESS. GOVERNMENT REGULATIONS PARTICULARLY THE DRIVE FOR INDIVIDUAL PRIVACY RIGHTS, WERE SEEN TO PLAY AN IMPORTANT ROLE IN DETERMINING DATA BASE DIRECTIONS AND THE PANEL'S GUIDANCE ON COST IMPACT SUGGEST THAT ORGANIZATIONS WOULD EXPERIENCE REDUCED COSTS WITH DATA BASE TECHNOLOGY. STANDARDS PERVADED ALL ISSUES AND WERE FOUND NECESSARY IN SEVERAL SUB-AREAS OF DATA BASE TECHNOLOGY BUT THE PANEL SAW NO IMMEDIATE LIKELIHOOD OF NATIONAL DATA BASE STANDARDS. THE USER EXPERIENCE WORKING PANEL NOTED THAT DATA BASE SYSTEMS HAD IMPACTED THEIR ORGANIZATIONS TO THE EXTENT OF RECONSIDERING EXISTING DATA FLOWS, AREAS OF RESPONSIBILITIES, AND PROCEDURES.

76120003 WESTIN, ALAN F., COMPUTERS, HEALTH RECORDS AND CITIZEN RIGHTS. DIV. 640. COLUMBIA UNIV., NEW YORK. DEPT. OF POLITICAL SCIENCE. DEC 76. MCNO-157, 5-35886. (LC 76-608322). 401P

THIS REPORT INVESTIGATES THE IMPACT OF COMPUTERS ON CITIZEN RIGHTS IN THE HEALTH RECORD-KEEPING AREA. UNDER DR. ALAN F. WESTIN'S DIRECTION, FROM JULY OF 1974 TO APRIL OF 1976, A SMALL INTERDISCIPLINARY TEAM DID THE FOLLOWING: (1) EXAMINED PUBLISHED LITERATURE FROM MEDICINE AND HEALTH, LAW, COMPUTING, AND SOCIAL SCIENCE, (2) CONDUCTED INTERVIEWS WITH MAJOR COMPUTER MANUFACTURERS, SYSTEMS DEVELOPERS, HEALTH PROFESSIONALS AND CIVIL LIBERTIES, PUBLIC INTEREST, CONSUMER, AND MINORITY-RIGHTS GROUPS; (3) MADE ON-SITE VISITS TO SIX REPRESENTATIVE HEALTH-CARE ORGANIZATIONS USING COMPUTERS TO HANDLE PERSONAL RECORDS; (4) CORRESPONDED WITH 70 ORGANIZATIONS IN THE HEALTH FIELD; AND (5) SUBJECTED AN INITIAL DRAFT REPORT TO REVIEW BY A CONFERENCE OF EXPERTS IN SEPTEMBER 1975 AND SUBSEQUENTLY BY ABOUT 50 OUTSIDE REVIEWERS. THE FINDINGS OF THIS INVESTIGATION WERE THEN COMBINED INTO THIS FOUR-PART REPORT. PART ONE DESCRIBES THE WORLD OF MEDICAL DATA AND CITIZENS RIGHTS WITHIN THE FRAMEWORK OF THREE ZONES--PRIMARY HEALTH CARE (BY HEALTH PROFESSIONALS), SERVICE PAYERS AND HEALTH CARE REVIEWERS, AND SOCIAL USES OF HEALTH DATA (SUCH AS IN EMPLOYMENT, LIFE INSURANCE, AND WELFARE); PART TWO TREATS PATTERNS OF COMPUTERIZATION IN HEALTH CARE IN EACH OF THE ABOVE ZONES; PART THREE CONTAINS THE PROFILES OF THE SIX HEALTH-CARE ORGANIZATIONS THAT WERE STUDIED IN DEPTH; AND PART FOUR ANALYZES THE IMPACT OF COMPUTERIZATION ON PERSONAL HEALTH RECORDS, PRESENTS COMPARISONS WITH SIX OTHER DEMOCRATIC NATIONS, AND STATES 12 RECOMMENDED MANAGEMENT PRINCIPLES FOR HEALTH CARE DATA SYSTEMS. THE REPORT ALSO CONTAINS A 28 PAGE BIBLIOGRAPHY AND TWELVE APPENDICES WITH SUPPORT DOCUMENTS AND INFORMATION.

76120004 MEISSNER, PAUL, REPORT OF THE WORKSHOP ON ESTIMATION OF SIGNIFICANT ADVANCES IN COMPUTER TECHNOLOGY, DIV. 650, DEC 76, NBSIR 76-1189, 33P

A WORKSHOP ON THE ESTIMATION OF SIGNIFICANT ADVANCES IN COMPUTER TECHNOLOGY WAS CONDUCTED BY THE INSTITUTE FOR COMPUTER SCIENCES AND TECHNOLOGY AT THE NATIONAL BUREAU OF STANDARDS ON AUGUST 30-31, 1976. THE WORKSHOP WAS ATTENDED BY 20 REPRESENTATIVES FROM INDUSTRY, RESEARCH ORGANIZATIONS, UNIVERSITIES AND GOVERNMENT AGENCIES. THE WORKSHOP WAS HELD TO OBTAIN CURRENT SCIENTIFIC AND TECHNICAL INFORMATION ON ADVANCES IN COMPUTER TECHNOLOGY WHICH COULD SIGNIFICANTLY IMPACT THE FEDERAL GOVERNMENT'S KNOWLEDGE AND USE OF COMPUTER TECHNOLOGY DEVELOPMENTS IN RELATION TO COMPUTER SECURITY AND EXPORT ADMINISTRATION. PRESENTATIONS WERE MADE ON ANTICIPATED ADVANCES IN COMPUTER ARCHITECTURE AND SEMICONDUCTOR TECHNOLOGY. IT WAS INDICATED THAT THE PRESENT TRENDS IN COMPONENT DENSITY FOR LSI WILL CONTINUE TO INCREASE AT THE CURRENT RATE FOR AT LEAST FIVE YEARS. THE SPEED OF LOGIC CIRCUITRY HAS BEEN INCREASING AT A RATE OF ABOUT 1.5 MEGAHERTZ PER YEAR, AND A SPEED OF 30 MEGAHERTZ IS PRESENTLY ATTAINABLE. SPEED-POWER RATIOS HAVE BEEN IMPROVING BY A FACTOR OF 10 ABOUT EVERY 4 YEARS, AND A SIMILAR IMPROVEMENT APPEARS LIKELY IN THE NEXT 4 YEARS. THE CURRENT EMPHASIS IN DEVELOPMENT WORK IS ON ACHIEVING HIGH DENSITY AT LOW COST. IN ORDER TO PROVIDE A VEHICLE AROUND WHICH TO ORGANIZE ITS DISCUSSIONS, THE WORKSHOP CONSIDERED THE DESIGN OF A HYPOTHETICAL MACHINE FOR EXTRACTING THE KEY USED FOR ENCRYPTING DATA UNDER THE PROPOSED NBS DATA ENCRYPTION STANDARD. SEVERAL DESIGNS WERE POSTULATED AND ENGINEERING ESTIMATES WERE DEVELOPED FOR OPERATING SPEED, SIZE, DEVELOPMENT TIME, COST AND OTHER FACTORS.

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360
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ADDENDUM

Addendum: Additional ICST Publications

Anderson, Ruth, Ethel Marden, Beatrice A.S. Marron, File Organization for a Large Chemical Information System, Div. 640, Apr. 18, 1966, TN-285, 17p, 5 refs.

Cornog, D.Y., F.C. Rose, Legibility of Alphanumeric Characters and Other Symbols. II. Reference Handbook, Feb. 10, 1967, NBS MISC. PUBL. 262-2, 40p. (LC 64-60082)

CODASYL COBOL Journal of Development 1968, Div. 600, Jul. 1969, NBS HB-106, 344p. (LC 73-601243)

Evans, John M., Joseph T. O'Neill, John L. Little, George E. Clark, James S. Albus, Anthony J. Barbera, Bradford M. Smith, Dennis W. Fife, Elizabeth N. Fong, David E. Gilsinn, Frances E. Holberton, Brian G. Lucas, Gordon E. Lyon, Beatrice A.S. Marron, Mable V. Vickers, Justin C. Walker, Standards for Computer Aided Manufacturing, Div. 600, Jun. 1977, NBSIR 76-1094, 352p., 125 refs.

Goumas, Nicholas P., Calibration of Unrecorded Low and Medium Density Type Magnetic Disk Pack Surfaces, Div. 650, Oct. 1975, TN-884, 23p. (SD C13.46:884)

Warnar, Robert B.J., Peter J. Calomeris, COMPUTER SCIENCE AND TECHNOLOGY: Foreign and Domestic Accomplishments in Magnetic Bubble Device Technology, Div. 660, Jan. 1977, NBS SP 500-1, 50p, 51 refs. (LC 76-608386, SD C13.10:500-1)

Moore, Gwendolyn B., John L Kuhns, Jeffrey L. Trefftzs, Christine A. Montgomery, COMPUTER SCIENCE AND TECHNOLOGY: Accessing Individual Records from Personal Data Files Using Non-Unique Identifiers, Div. 640, Feb. 1977, NBS SP 500-2, Contract 5-35928, 203p. (LC 76-57950, SD C13.10:500-2)

Leong-Hong, Belkis, Beatrice A.S. Marron, COMPUTER SCIENCE AND TECHNOLOGY: Technical Profile of Seven Data Element Dictionary/Directory Systems, Div. 640, Feb. 1977, NBS SP 500-3, 45p, 61 refs. (LC 76-58915, SD C13.10:500-3)

Watkins, Shirley Ward, Marshall D. Abrams, COMPUTER SCIENCE AND TECHNOLOGY: Survey of Remote Terminal Emulators, Div. 650, Apr. 1977, NBS SP 500-4, 80p, 27 refs. (LC 77-608013, SD C13.10:500-4)

Warnar, Robert B.J., COMPUTER SCIENCE AND TECHNOLOGY: Impact of Charge-Transfer Device Technology on Computer Systems, Div. 660, Apr. 1977, NBS SP 500-5, 48p, 86 refs. (LC 77-608053, SD C13.10:500-5)

Cotton, Ira W., COMPUTER SCIENCE AND TECHNOLOGY: Computer Network Interconnection: Problems and Prospects, Div. 650, Apr. 1977, NBS SP 500-6, 83p, 56 refs. (LC 77-608026, SD C13.10:500-6)

Gray, Martha M., (comp.), COMPUTER SCIENCE AND TECHNOLOGY: Computers in the Federal Government: A Compilation of Statistics, Div. 660, Jun. 1977, NBS SP 500-7, 41p, 5 refs. (LC 77-608102, SD C13.10:500-7)

Evans, John M., Jr., Russel Kirsch, Roger N. Nagel, (eds.), COMPUTER SCIENCE AND TECHNOLOGY: Workshop on Standards for Image Pattern Recognition, Proceedings of a Workshop Held at the National Bureau of Standards, Gaithersburg, MD, June 3-4, 1976, Div. 600, May 1977, NBS SP 500-8, 115 p. (LC 77-4773, SD C13.10:500-8)

Wood, Helen M., COMPUTER SCIENCE AND TECHNOLOGY: The Use of Passwords for Controlled Access to Computer Resources, Div. 650 , May 1977, NBS SP 500-9, 59p, 79 refs. (LC 77-5558, SD C13.10:500-9)

Fong, Elizabeth, COMPUTER SCIENCE AND TECHNOLOGY: A Data Base Management Approach to Privacy Act Compliance, Div. 640, Jun. 1977, NBS SP 500-10, 34p, 11 refs. (LC 77-608106, SD C13.10:500-10)

Fife, Dennis W., COMPUTER SCIENCE AND TECHNOLOGY: Computer Software Management: A Primer for Project Management and Quality Control, Div. 640, Jul. 1977, NBS SP 500-11, 58p, 19 refs. (LC 77-608127, SD C13.10:500-11)

Aronson, Jules, COMPUTER SCIENCE AND TECHOLOGY: Data Compression--A Comparison of Methods, Div. 640, Jun. 1977, NBS SP 500-12, 39p, 30 refs. (LC 77-608132, SD C13.10:500-12)

Neumann, Albrecht J., COMPUTER SCIENCE AND TECHNOLOGY: Features of Seven Audit Software Packages--Principles and Capabilities, Div. 640, Jul. 1977, NBS SP 500-13, 58p, 12 refs. (LC 77-608147, SD C13.10:500-13)

Hardy, I. Trotter, Leong-Hong, Belkis, Fife, Dennis W., COMPUTER SCIENCE AND TECHNOLOGY: Software Tools: A Building Block Approach, Div. 640, Aug. 1977, NBS SP 500-14, 66p. (LC 77-608213, SD C13.10:500-14)

Krasny, Mitchell A., (ed.), COMPUTER SCIENCE AND TECHNOLOGY: Documentation of Computer Programs and Automated Data Systems. Proceedings of a Symposium Held at the National Bureau of Standards, Gaithersburg, MD, October 12, 1976, Jul. 1977, NBS SP 500-15, 66p. (LC 77-608169, SD C13.10:500-15)

McEwen, Hazel, COMPUTER SCIENCE AND TECHNOLOGY: A Survey of Eleven Government-Developed Data Element Dictionary/Directory Systems, Div. 640, Aug. 1977, NBS SP 500-16, 111p. (LC 77-608155, SD C13.10:500-16)

Personal Author Index

Abrams, Marshall D.	NBS SP 500-4
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Cornog, D. Y.	NBS MISC. PUBL. 262-2
Cotton, Ira W.	NBS SP 500-6
Evans, John M., Jr.	NBS SP 500-8
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Rose, F. C.	NBS MISC. PUBL. 262-2
Trefftzs, Jeffrey L.	NBS SP 500-2
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16. ABSTRACT *(A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.)*

This bibliography consists of the publications authored by personnel in the Institute for Computer Sciences and Technology (ICST), National Bureau of Standards (NBS), during the period from 1966 through 1976. The references, which total more than two hundred, are to publications in NBS media only. There are three cross-reference indexes to the bibliography: personal author index, key word index, and key word out-of-context (KWOC) index. Also included is a list of publications in the National Bureau of Standards Special Publication 500- series.

17. KEY WORDS *(six to twelve entries; alphabetical order; capitalize only the first letter of the first key word unless a proper name; separated by semicolons)*

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